Department of Commerce • National Oceanic & Atmospheric Administration • National Weather Service

NATIONAL WEATHER SERVICE INSTRUCTION 10-311

DECEMBER 19, 2014

Operations and Services

Marine and Coastal Weather Services, NWSPD 10-3

OFFSHORE, NAVTEX, HIGH SEAS, AND MARINE FORECAST SERVICES

NOTICE: This publication is available at: http://www.nws.noaa.gov/directives/.

OPR: OS21 (W. Weeks) **Certified by:** OS21 (M. Tew)

Type of Issuance: Routine

SUMMARY OF REVISIONS: This instruction supersedes NWSI 10-311, *Offshore, NAVTEX, High Seas, and Marine Forecast Services*, dated October 31, 2012. Changes made to this directive include:

1. Section 2.1: Included "the Caribbean Sea" to the applicable waters of the OFF.
2. Added WFO Fairbanks to the WFOs which prepare the text offshore forecast. Also added WFO Fairbanks in section 2.2.3 for issuance times.
3. Section 2.2.3: Added above the issuance times: "…except during tropical cyclone events, when the routine issuance time may be delayed:"
4. Section 2.2.3: Added beneath the issuance times: "During a tropical cyclone event, the issuing office may delay the "scheduled" issuance of the OFF until after advisories from the NHC, Central Pacific Hurricane Center (CPHC) or Joint Typhoon Warning Center are issued. In these circumstances, the OFF should be issued as soon as reasonably possible, but no later than 1 hour after receiving the appropriate hurricane center's advisory."
5. Section 2.3.3: Added paragraph: "Offices issuing Offshore forecasts for areas with significant sea ice coverage may choose to cease forecasts when the zone becomes mostly covered. The threshold for determining when the zone forecast should be started and ended will be determined by the WFO and Regional headquarters according to partner and user needs."
6. Sections 2.3.6 and 2.3.7: Added the following: "The preferred way to accomplish the wording is through the use of the GFE and the text formatters. The formatters will create probabilistic wording for the specific forecast periods in the body of the forecast when appropriate."
7. Sections 2.3.6 and 2.3.7, examples: Changed CONDITIONS "EXPECTED" to CONDITIONS "POSSIBLE."
8. Section 3.2.2: Added WFO Fairbanks to the list of WFOs which may include a marine discussion of their OFF area in their AFD in lieu of a MIM."
9. Section 4.3.3, NAVTEX and Figure 3 (in section 4.4): The phrase in the NAVTEX forecast referring to detailed CWFs was shortened / revised.
10. Section 4.4, NAVTEX: Added time periods "DAY 3 NIGHT", "DAY 4 NIGHT", and DAY 5 NIGHT" to Figure 3.

11. Section 4.4.1,NAVTEX - Unscheduled Forecasts: Added ”During a tropical cyclone event, the issuing office may delay the “scheduled” issuance of the NAVTEX until after advisories from the NHC, CPHC or Joint Typhoon Warning Center are issued. In these circumstances, the NAVTEX should be issued as soon as reasonably possible but no later than 1 hour after receiving the appropriate hurricane center’s advisory”.
12. New examples of Offshore, High Seas, NAVTEX, and MIM forecasts have replaced the old versions.
13. Added a section for coordination and collaboration processes (see section 2.3.9).

Signed December 5, 2014

Andrew D. Stern Date
Acting Director, Office of Climate,
Water, and Weather Services

OFFSHORE, NAVTEX, AND HIGH SEAS MARINE FORECAST SERVICES
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1 Introduction. This procedural instruction provides product specifications for the main alphanumeric and graphical offshore and high seas weather products issued by four National Weather Service (NWS) Weather Forecast Offices (WFOs), and the National Centers for Environmental Prediction (NCEP), including the Ocean Prediction Center (OPC), and the Tropical Analysis and Forecast Branch (TAFB) of the National Hurricane Center (NHC). The WFOs which prepare the text offshore forecast are: WFO Honolulu, HI (HFO), WFO Anchorage, AK (AFC), WFO Fairbanks (AFG), and WFO Juneau, AK (AJK).

2 Offshore Waters Forecast (product category OFF)

2.1 Mission Connection. The Offshore Waters Forecast (OFF) provides forecast and warning information to mariners who travel on the oceanic waters adjacent to the U.S., its territorial coastal waters and the Caribbean Sea. The OFF, produced in both graphic and alphanumeric format, serves users who operate from the coastal waters out several hundred nautical miles from shore. OPC and TAFB also produce the OFF in gridded format.

2.2 Issuance Guidelines

2.2.1 Creation Software. WFOs will produce the OFF using the Advanced Weather Interactive Processing System (AWIPS) software formatters. The Interactive Forecast Preparation System (IFPS) Graphical Forecast Editor (GFE) application formatting tools will be used for generation of product content.

2.2.2 Issuance Criteria. The Alaska Region will issue the OFF at least twice a day with updates as necessary. TAFB, OPC, and WFO HFO, will issue the OFF four times daily at regular intervals, with updates as necessary.

2.2.3 Issuance Time. OFFs are routinely-scheduled products. Forecasters should make the OFF available to users by the scheduled issuance time, but no earlier than one (1) hour before this issuance time. In the communications header, list the issuance time in Coordinated Universal Time (UTC), but in the mass media header, list the valid time in local time.

An optional time period “Rest of this Afternoon” or “Rest of Tonight” period may be used to cover situations when there is significant ongoing weather such as a Gale warning during issuance time, though expected to end by 6AM or 6PM where applicable. Even though the product is valid at issuance, this clarifies that the ongoing conditions will end shortly. It may not be clear that a product issued at 4:30 PM with a 1st period listed as “TONIGHT” covers active ongoing weather at 4:30 PM in the afternoon, which ends in late afternoon or early evening.

National Centers and WFOs should issue OFFs based on the following, except during tropical cyclone events, when the routine issuance time may be delayed:

Responsible Office	Issuance Times (UTC) Scheduled Issuance	Scheduled Issuance
OPC (Atlantic)	0320	
	0920	
	1520	
	2120	
OPC (Pacific)	0420	
	1020	
	1620	
	2210	
NHC / TAFB	0330	
	0930	
	1530	
	2130	
WFOs Anchorage, Juneau, Fairbanks	1200 (DST*)	1300 (standard time)
	0000 (DST*)	0100 (standard time)
WFO Honolulu	0400	
	1000	
	1600	
	2200	

*DST means Daylight Savings Time

During a tropical cyclone event, the issuing office may delay the "scheduled" issuance of the OFF until after advisories from the NHC, Central Pacific Hurricane Center (CPHC) or Joint Typhoon Warning Center are issued. In these circumstances, the OFF should be issued as soon as reasonably possible, but no later than 1 hour after receiving the appropriate hurricane center's advisory.

In all forecasts, include forecast periods as shown below. The Days 3 through 5 periods may be subdivided into 12-hour time blocks. All forecast periods beyond the current day will be described by the day of the week. For example, in a forecast issued Sunday evening, include: TONIGHT, MON, MON NIGHT, etc.

The early morning forecasts will cover:

Rest of Tonight	(Optional. covers issuance time to 6AM, as needed)	Pre 1st Period
Today	(Issuance time to 6PM)	1st Period
Tonight	(6PM to 6AM)	2nd Period
Day 2	(6AM to 6PM)	3rd Period
Day 2 Night	(6PM to 6AM)	4th Period
Day 3	(6AM to 6AM)	5th Period
Day 4	(6AM to 6AM)	Day 4
Day 5	(6AM to 6AM)	Day 5

The late afternoon forecast will cover:

Rest of This Afternoon	(Optional. covers issuance time to 6PM, as needed)	Pre 1st Period
Tonight	(Issuance time to 6AM)	1st Period
Tomorrow	(6AM to 6PM)	2nd Period
Tomorrow Night	(6PM to 6AM)	3rd Period
Day 2	(6AM to 6PM)	4th Period
Day 2 Night	(6PM to 6AM)	5th Period
Day 3	(6AM to 6AM)	6th Period
Day 4	(6AM to 6AM)	Day 4
Day 5	(6AM to 6AM)	Day 5

2.2.4 Valid Time. OFFs are valid from the time of issuance until the expiration time.

2.2.5 Product Expiration Time. The OFF product expiration time is not more than 14 hours from the initial issuance.

2.3 Technical Description. OFFs will follow the format and content described in this section.

2.3.1 Mass News Disseminator (MND) Broadcast Line. None.

2.3.2 MND Header. The OFF MND Header is, "OFFSHORE WATERS FORECAST." A location may be added, on the same line. See Figure 1.

2.3.3 Content. Follow the format for the OFF as shown in section 2.4. Examples of the OFF can be found in Appendix A. Forecasters may subdivide each marine zone (e.g., NORTHERN HALF, SOUTHERN HALF; WATERS SOUTH OF 40N; etc.) to describe significant differences. If geographical reference points are used in the subdivision, forecasters should ensure they are well known.

Forecasters should include applicable National Marine Sanctuaries (NMS) name(s), as noted in NWS Instruction (NWSI) 10-302, in the appropriate OFF. These NMS names should be included in the specific zone(s) and / or the general area description.

An optional time period "Rest of this Afternoon" or "Rest of Tonight" period may be used to cover situations when there is significant ongoing weather such as a Gale warning during issuance time, though expected to end by 6AM or 6PM where applicable. Even though the product is valid at issuance, this clarifies that the ongoing conditions will end shortly. It may not be clear that a product issued at 4:30 PM with a first period listed as "TONIGHT" covers active ongoing weather at 4:30 PM in the afternoon, which ends in late afternoon or early evening.

Similarly, forecasters may combine zones for which they are responsible if conditions are expected to be homogeneous. However, do not combine a zone with only a portion of another. The forecaster may combine forecast periods (beyond the first period) if, in the forecaster's opinion, the weather elements in each are consistent. Also, the forecaster may subdivide the first period of the forecast to account for rapid weather changes. The OFF includes marine-based zone Universal Geographic Codes (UGCs).

Above the synopsis, OFF products will include a statement that explains the seas forecast as the significant wave height which is the average of the highest 1/3 of the waves, and that individual waves may be more than twice as high.

Offices issuing OFFs for areas with significant sea ice coverage may choose to cease forecasts when the zone becomes mostly covered. The threshold for determining when the zone forecast should be started and ended will be determined by the WFO and Regional headquarters according to partner and user needs.

2.3.4 Synopsis. The synopsis for the OFF should be a concise, understandable description of the significant surface weather features that may cause significant winds and seas over the forecast area during the forecast period. Areas in the tropics often have significant upper level features which are the dominant cause of the weather, e.g., TUTTs (Tropical Upper Tropospheric Troughs) and upper level lows. The synopsis may mention these features.

Forecasters should concentrate on the first 48 hours. At a minimum, the synopsis should identify major weather systems and the strength, trend, and movement of each. After 48 hours, less detail is needed; include a general description of systems impacting the area especially if they are expected to generate gale force, storm force, or hurricane force winds. Such systems do not necessarily have to be in the forecast area.

Marine synopses for the high seas and offshore forecasts and Marine Weather Discussions (MIMs) may use descriptive terms for winds and seas consistent with the Beaufort scale as shown in the NWS glossary (http://www.weather.gov/glossary/).

For tropical cyclones expected to impact the forecast area, forecasters should include forecast positions out to 72 hours with a generalized position description at 96 and 120 hours. In accordance with NWSI 10-601, it is highly recommended the following caveat be included in the synopsis: "Forecast winds in and near active tropical cyclones should be used with caution due to uncertainty in forecast track, size, and intensity."

When a volcano near an offshore zone has a confirmed eruption, or is in a heightened active state, it should be briefly mentioned in the synopsis. The volcano should be identified by name and location (example: the latitude / longitude position, and / or mountain range, and / or a distance from a major population center). If the volcano is in a heightened level of unrest, the specific threat level may be included. If the volcano has recently erupted, state the most recent eruption time and if ash or debris has been reported or is suspected on the ocean surface in the offshore area. Confirmation of eruption or threat level attribution may be given to the appropriate volcano observatory (example: Alaska Volcano Observatory or Cascades Volcano

Observatory). Forecasters may also include the appropriate office name and phone number or High Frequency (HF) radio frequency to request mariner reports. It is imperative that any mention about volcanic activity in an offshore product first be coordinated with the WFO responsible for neighboring coastal waters areas.

Examples:

MOUNT RAINIER VOLCANO [AT POSITION 46.8N 121.7W] [IN THE CASCADE MOUNTAIN RANGE OF WASHINGTON] [60 NM SE OF TACOMA] IS CURRENTLY IN A STATE OF UNREST AND COULD ERUPT WITH LITTLE NOTICE. MARINERS TRAVELING IN THE VICINITY OF MOUNT RAINIER ARE URGED TO EXERCISE CAUTION. IF MARINERS ENCOUNTER VOLCANIC ASH OR FLOATING VOLCANIC DEBRIS…YOU ARE ENCOURAGED TO REPORT THE OBSERVATION WITH THE OCEAN PREDICTION CENTER BY CALLING 301-683-1520.

THE ALASKA VOLCANO OBSERVATORY CONFIRMED OKMOK VOLCANO [AT POSITION 53.4N 168.2W] [IN THE CENTRAL ALEUTIAN ISLANDS] [70 NM SW OF DUTCH HARBOR] HAS ERUPTED AT 1437 UTC 9 FEBRUARY. VOLCANIC ASH MAY BE REACHING THE SURFACE NEAR/IN THE VICINITY OF UMNAK ISLAND. ASH HAS BEEN REPORTED ON THE SURFACE OF THE OCEAN 30 NM S OF UMNAK ISLAND. MARINERS SHOULD EXERCISE CAUTION. IF MARINERS ENCOUNTER VOLCANIC ASH OR FLOATING VOLCANIC DEBRIS…YOU ARE ENCOURAGED TO REPORT THE OBSERVATION TO THE KODIAK WEATHER SERVICE OFFICE AT 907-487-9730 OR HF RADIO CALL SIGN KWL38.

2.3.5 Headlines. Use headlines to emphasize weather events likely to have a significant impact on mariners or marine operations. In each headline, indicate the severity of the event in the priority order given below.

The most significant headline generally should stand alone. However, forecasters may include more than one headline to indicate multiple hazards or worsening conditions. Do not include a headline that downgrades a current condition in later periods (e.g., a storm warning in effect improving to a gale warning). Refer to the NWS definitions in NWSI 10-303 for appropriate definitions of gale, storm, and hurricane force wind warnings.

In the headline, forecasters should include a general statement of the threat, the time period, and, if necessary, the specific area impacted.

Do not include headlines for severe local storm watches and warnings, tropical cyclone watches, and small craft advisories in the OFF. However, forecasters may use other headlines, such as "WARNING POSSIBLE WED" or "GALE FORCE WINDS POSSIBLE WED", especially for stronger storms in later forecast periods.

a. Non-Tropical Cyclone Related Headlines. In the OFF, forecasters should use the following headlines, in the priority order given, if appropriate criteria are occurring or are expected to be met. For Gale, Storm and Hurricane Force Wind Warnings, NWS offices

responsible for the OFF will issue warnings when wind criteria are forecast for the first two twelve (12) hour periods (for the first 24 hours), and may issue warnings through the fourth period when forecaster confidence is high. In addition, when forecaster confidence is high, marine offices may include a headline in the OFF such as "GALE FORCE (or GALE FORCE CONDITIONS or STORM FORCE or HURRICANE FORCE WINDS) POSSIBLE xxxDAY," for the remaining periods of the forecast.

1. Hurricane Force Wind Warning
2. Storm Warning
3. Gale Warning
4. Heavy Freezing Spray Warning
5. Volcanic Ashfall Advisory

In accordance with NWSI 10-310, in situations where winds gust frequently above advisory / warning thresholds, forecasters should use discretion in issuing advisories or warnings, as appropriate, to alert users and partners to hazardous marine conditions. Gusts occurring on a time-scale greater than two hours are considered frequent. Gusts should not be forecast unless they are expected to be at least 15 knots (KT) greater than the sustained wind.

Based on event significance, forecasters may include headlines for events expected to impact the forecast area such as freezing spray, restrictions lowering visibilities below 1/4 nautical mile (NM), or ashfall from volcanoes.

b. Tropical Cyclone Related Headlines. For Tropical Storm and Hurricane Warnings, NWS offices responsible for the OFF will issue appropriate warnings when wind criteria are forecast for the first 36 hours (if forecaster confidence is high, 48 hours) based on forecast information contained in the appropriate tropical cyclone advisories.

c. Volcanic Ash Headlines. Forecasters should include an Ashfall Advisory headline without the word "WARNING" if a confirmed volcanic eruption could significantly impact marine operations in the given offshore zone.

2.3.6 1-3 Day Forecast Periods. In the OFF product, include specific wind and sea states for all periods in the 1 through 3 Day forecasts. Forecasters should also include major precipitation events, ice accretion, ashfall, and low visibility conditions as conditions warrant. The preferred way to accomplish the wording is through the use of the GFE and the text formatters. The formatters will create probabilistic wording for the specific forecast periods in the body of the forecast when appropriate.

Example:
.TUE...TROPICAL STORM CONDITIONS POSSIBLE. W WINDS 25 TO 30 KT. SEAS 10 TO 15 FT.

2.3.7 4-5 Day Forecast Periods. Include the wind and sea height information in the 4 through 5 Day forecast periods. Forecasters may also note other major events such as ice accretion and low visibility.

When a tropical cyclone threatens to impact an OFF zone, forecasters should include an indication of the tropical cyclone, based on NHC, CPHC, and / or Weather Prediction Center (WPC) guidance, for the specific day(s) impacted. Because large positional and intensity errors are possible in these cases, do not use specific wind and sea values. The preferred way to accomplish the wording is through the use of the GFE and the text formatters. The formatters will create probabilistic wording for the specific forecast periods in the body of the forecast when appropriate.

Example:
.SUN…HURRICANE CONDITIONS POSSIBLE.

2.3.8 OFF - Forecast Parameters

a. Winds. Winds represent predominant conditions at 10 meters above the surface of the water. Forecasters should give directions to eight points of the compass and speeds rounded to the nearest 5 KT.

Forecast changes in wind direction should be for changes of 45 degrees or more, and forecast changes in wind speed should be for changes of 10 knots or more. Wind speed transition terms such as "INCREASING" and "DIMINISHING" and direction transition terms such as "BECOMING" and "SHIFTING" should be used to add clarity to the forecast trends. The terms "VEERING, BACKING, BECOMING, SHIFTING," or "RISING" may be used when appropriate, but not "DECREASING." Transition terms will end in an "-ing," e.g., Do not use the term "BECOME," "INCREASE," or "SHIFT."

When there are significant differences expected between sustained winds and gusts, the OFF should contain either a specific wind gust speed or a more generic phrase to describe the gusty condition of the winds, e.g., "E WINDS TO 70 KT WITH GUSTS TO 85 KT."; "WITH HIGHER GUSTS." Gusts should not be forecast unless they are expected to be at least 15 KT greater than the sustained wind.

Note significant changes (i.e., at a minimum, those changes denoting a change in warning category) in the winds during the forecast period.

b. Seas. Give sea state as significant wave height or break it down into appropriate components (e.g., "WIND WAVES 2 TO 4 FT", "NORTHEAST SWELL TO 10 FT", "SEAS 12 FT"). Whenever a SWELL is specified, include the direction from which the swell is propagating, to 8 points of the compass. NCEP marine centers will provide a range of seas in their OFFs, i.e., 4 TO 6 FT or 10 TO 15 FT. When upper values in the range exceed double the lower value of the sea heights, a qualifier may be added to express the region where the highest seas are located.

Example: SEAS 10 TO 22 FT...HIGHEST SEAS N OF 28N BETWEEN 50W AND 65W.

Do not use descriptive terms, such as MODERATE or ROUGH.

Sea state forecasts should be included for marine areas or portions of marine areas not covered by ice. For other marine areas where coverage of 7/10 or more of sea ice is expected, forecasts of sea state are usually omitted; however, if the area has at least 10% contiguous open water, sea state forecasts may be given. In these cases, use the phrase "SEAS IN ICE FREE WATERS."

c. Significant Weather / Visibility. When it is expected, forecasters should include significant weather posing a hazard to navigation (i.e., widespread fog or other restriction lowering visibilities to 1/4 NM or less, or thunderstorms). Based on forecaster discretion, and/or expected impact to users, forecasters may include obstructions to visibility ranging between 1 ½ NM to 5 NM. Forecasters may use areal coverage terms like "patchy," "widespread," or "areas of" to describe fog or other significant weather. Forecasters may use precipitation probability terms "CHANCE", "OCCASIONAL", etc., as defined in NWSI 10-204, and may include specific visibility distances. However, do not include sky cover.

d. Icing. The forecaster should include freezing spray in the body of the forecast whenever ice accretion on exposed surfaces is likely. When freezing spray is forecast to meet warning thresholds, a headline should also be included (e.g., HEAVY FREEZING SPRAY WARNING...). An ice accretion rate of 2 centimeters (cm) / hour or greater is considered heavy freezing spray. See definitions in NWSI 10-303.

2.3.9 Coordination and Collaboration. Offices and centers with adjoining or overlapping areas of responsibility should coordinate and collaborate to ensure products are consistent and compatible. This effort includes communication with appropriate governmental forecast agencies outside the United States.

Forecasters should refer to Section 5, Digital Forecast Collaboration, of NWSI 10-201, *National Digital Forecast Database and Local Database Description and Specifications*, for detailed information on the coordination and collaboration processes for gridded forecasts and analyses, available at: http://www.nws.noaa.gov/directives/sym/pd01002001curr.pdf.

2.4 Format. The format of the OFF can be seen in Figure 1. This product is available in industry standard encoding and languages, and may include, but not limited to, American Standard Code for Information Interchange, eXtensible Markup Language, Wireless Markup Language and Hyper Text Markup Language (ASCII, XML, WML, and HTML).

(WMO ID) (ISSUANCE DATE TIME)
(AWIPS ID)

OFFSHORE WATERS FORECAST (PLUS OPTIONAL LOCATION)
NATIONAL WEATHER SERVICE (CITY)(STATE)
(VALID TIME) AM/PM (LOCAL TIME ZONE)(DAY)(DATE)

OFFSHORE WATERS FORECAST FOR (FORECAST AREA)

(STATEMENT EXPLAINING SEAS FORECAST)

(SYNOPSIS UGC CODE)-(EXPIRATION TIME)-
(VALID TIME) AM/PM (LOCAL TIME ZONE)(DAY)(DATE)

.SYNOPSIS FOR (BRIEF DESCRIPTION OF FORECAST AREA)...TEXT.

$$

(AREAL UGC[S])-(EXPIRATION TIME)-
(FORECAST AREAL DESCRIPTOR[S])
(VALID TIME) AM/PM (LOCAL TIME ZONE)(DAY)(DATE)

...HEADLINE (if needed)...

.PERIOD 1...
.PERIOD 2...
.PERIOD 3...
.PERIOD 4...
.PERIOD 5… (Optional Period for some issuances)…
.(DAY 3)...
.(DAY 4)...
.(DAY 5)...

Figure 1. **Offshore Waters Forecast (OFF) Format**

2.4.1 OFF - Unscheduled Forecasts. As needed, append either "...UPDATED" or "...CORRECTED" to the product header whenever, respectively, an unscheduled OFF is issued or when an error in the OFF is corrected. Add a short description of the updated or corrected items just below the areal header to highlight the change.

2.5 Graphic Products. Appendix A lists existing graphic products. Forecasters will ensure the graphics are consistent with compatible text products. Additionally, forecasters should ensure graphic products reaching the edges of an office's warning area are consistent with compatible products in neighboring warning areas.

2.6 Updates, Amendments and Corrections. OFFs will be updated when the on-duty forecast team believes the current forecast is not representative, or when significant format or content errors are detected. WFOs and National Centers will correct OFFs for significant format and grammatical errors. Amendment codes (AAx) and update/correction codes (CCx) will be followed using NWSI 10-1701, section 4.1.

(WMO ID) (ISSUANCE DATE TIME)
(AWIPS ID)

OFFSHORE WATERS FORECAST**...UPDATED (or ...CORRECTED)**
NATIONAL WEATHER SERVICE (CITY)(STATE)
(VALID TIME) AM/PM (LOCAL TIME ZONE)(DAY)(DATE)

OFFSHORE WATERS FORECAST FOR (FORECAST AREA) (UPDATED FOR….(ex. HIGHER SEAS))

(STATEMENT EXPLAINING SEAS FORECAST)

(SYNOPSIS UGC CODE)-(EXPIRATION TIME)-
(VALID TIME) AM/PM (LOCAL TIME ZONE)(DAY)(DATE)

.SYNOPSIS FOR (TOTAL FORECAST AREA)...TEXT.

$$

(AREAL UGC[S])-(EXPIRATION TIME)-

Figure 2. **Unscheduled Offshore Waters Forecast (OFF) Format**

3 Marine Weather Discussion (product category MIM)

3.1 Mission Connection. The Marine Weather Discussion (MIM) is a semi-technical product issued by the National Centers, analogous to the Area Forecast Discussion (AFD), primarily used as a means to explain the rationale behind a forecast and summarize warnings in effect. The MIM is used to convey forecast and warning information to WFOs, federal agencies, weather sensitive officials, and the media.

3.2 Issuance Guidelines

3.2.1 Creation Software. The MIM should be composed using text editors and / or available formatters.

3.2.2 Issuance Criteria. The MIM should be issued two to four times daily by the National Centers issuing the OFF; reference section 2.2.3. In lieu of a MIM, WFOs Honolulu (HFO) Anchorage (AFC), Fairbanks (AFG), and Juneau (AJK) may include a marine discussion of their OFF area in their AFD.

3.2.3 Issuance Time. The MIM should be issued shortly before the scheduled OFF. Also, forecasters should issue a brief MIM to provide information of an impending OFF update.

3.2.4 Valid Time. MIMs are valid from time of release until the next complete update.

3.2.5 Product Expiration Time. MIMs do not contain a product expiration time.

3.3 Technical Description. The MIM will follow the format and content described in this section.

3.3.1 UGC Type. There is no UGC coding associated with the MIM product.

3.3.2 MND Broadcast Line. None.

3.3.3 MND Header. The MND Header is "MARINE WEATHER DISCUSSION".

3.3.4 Content. The MIM should describe synoptic and mesoscale features expected to affect areas in and adjacent to offshore waters in both the Atlantic and Pacific Oceans. This narrative describes weather, wind speeds, and seas through the next five days. The MIM should emphasize timing and issuance of warnings; include future trends of wind and sea conditions, effects of currents such as the Gulf Stream in the Atlantic Ocean, and how the latest computer model guidance is handling features of significance to the mariner. The MIM may include the degree of confidence for any forecast element which would benefit coastal WFOs and other users' decision making. MIMs may use descriptive terms for winds and seas consistent with the Beaufort scale as shown in the NWS glossary: (http://www.weather.gov/glossary/).

3.4 Format. The MIM should be consistent with instructions for the AFD contained in NWSI 10-503. Examples of the MIM can be found in Appendix A. This product is available in industry standard encoding and languages, and may include, but not limited to, ASCII, XML, WML and HTML.

3.5 Updates, Amendments and Corrections. MIMs will be updated when the on-duty forecast team believes the current forecast is not representative, or when format or content errors are detected. Issuing offices will correct MIMs for format and grammatical errors when discovered.

4 NAVTEX Forecasts

4.1.1 Mission Connection. The NAVTEX acronym is derived from NAVigational information TEleprinter EXchange. NAVTEX forecasts support the international SOLAS (Safety of Life At Sea) convention of the International Maritime Organization (IMO). The NAVTEX forecast is a text forecast issued to accommodate broadcast restrictions of the U.S. Coast Guard NAVTEX transmitters. NAVTEX forecasts provide forecast and warning information to mariners who travel on the oceanic waters adjacent to the U.S. and its territorial coastal waters, and serves users who operate from the coastal waters up to 200 NM from shore. The NAVTEX should include the highest winds and seas, and associated warnings for the respective broadcast area.

4.2 Issuance Guidelines

4.2.1 Creation Software. WFOs and National Center offices should use text editors and/or available formatters to compose the NAVTEX forecast.

4.2.2 Issuance Criteria. The NAVTEX forecast represents a combination of the Coastal Waters Forecast (CWF) and the OFF. However, those offices issuing the CWF and the OFF will retain full responsibility for those products.

4.2.3 Issuance Time. The NAVTEX forecast will be issued immediately following the OFF transmittal.

4.2.4 Valid Time. NAVTEX Forecasts are valid from the time of issuance until the expiration time.

4.2.5 Product Expiration Time. The NAVTEX forecast expiration time is not more than 14 hours from the initial issuance.

4.3 Technical Description. NAVTEX forecasts will follow the format and content described in this section.

4.3.1 MND Broadcast Line. None.

4.3.2 MND Header. The NAVTEX marine products are broadcast via U.S. Coast Guard (USCG) NAVTEX stations. Refer to NWSI 10-302, section 4, NAVTEX Forecast Areas of Responsibility, for detailed description of areas. For the NAVTEX first MND line use:

NAVTEX MARINE FORECAST [+ optional area description]

The 2nd line should be one line only, in accordance with NWSI 10-1701, section 4.2.3:

Issuing Office

The 3rd line should be in accordance with NWSI 10-1701, section 4.2.4:

Time / Date

No extraneous lines, e.g., "INCLUDING THE STELLWAGEN BANK NATIONAL MARINE SANCTUARY."

A general area description should not be included immediately below the MND lines.

4.3.3 Content. NAVTEX forecasts will include the same content as the CWF and the OFF. Exceptions: Do not include UGCs.

In each NAVTEX forecast, match the broadcast areas of the appropriate USCG transmitters as listed in NWSI 10-302. Forecasters may combine forecast periods if weather features are similar.

No NAVTEX forecast will be longer than 89 lines including blank lines. Include the phrase: "...PLEASE REFER TO DETAILED COASTAL WATERS FORECASTS (CWF) AVAILABLE THROUGH NOAA WEATHER RADIO AND OTHER SOURCES" before the synopsis.

4.3.4 Synopsis. The synopsis should be consistent with synopses contained in the CWF and the OFF.

4.3.5 Headlines. List applicable headlines from both CWFs and OFFs in the NAVTEX forecast, including those involving the extended portion of the forecast,. Exception: Do not include headlines for small craft advisories or for severe local storm watches and warnings. Append the annotation 'WITHIN XX NM OF SHORE' for items restricted to coastal waters areas, where XX is the appropriate distance of the restricted item.

4.3.6 1-2 Day Forecast Periods. Include conditions representing values found throughout the entire forecast area.

4.3.7 3-5 Day Forecast Periods. Include winds and seas only. Local policy may include significant weather (i.e., thunderstorms, freezing spray) in days 3-5.

4.3.8 NAVTEX - Forecast Parameters. In the NAVTEX forecast, include the same forecast parameters as forecast in the OFF and the CWF.

4.4 Format. This product is available in industry standard encoding and languages, which may include, but are not limited to, ASCII, XML, WML and HTML. To ensure proper dissemination of the NAVTEX forecast, follow the following format:

(WMO ID) (ISSUANCE DATE TIME)
(AWIPS ID)

NAVTEX MARINE FORECAST (PLUS OPTIONAL LOCATION)
NATIONAL WEATHER SERVICE (CITY)(STATE)
-example of alternative text for line 2:
NWS OCEAN PREDICTION CENTER WASHINGTON DC (See NWSI 10-1701)
(SCHEDULED ISSUANCE TIME) AM/PM (LOCAL TIME ZONE)(DAY)(DATE)

... PLEASE REFER TO DETAILED COASTAL WATERS FORECASTS (CWF) AVAILABLE THROUGH NOAA WEATHER RADIO AND OTHER SOURCES...

.SYNOPSIS...(TEXT).

(FORECAST AREA[S])

...HEADLINE(S) (if necessary)...

.PERIOD 1...
.PERIOD 2...
.PERIOD 3...
.PERIOD 4...
.PERIOD 5… (Optional Period for some issuances)…
.(DAY 3)…
.(DAY 3 NIGHT)…
.(DAY 4)...
.(DAY 4 NIGHT)…
.(DAY 5)...
.(DAY 5 NIGHT)...

$$

FORECASTER NAME (Optional)

Figure 3. **NAVTEX Forecast Format**

4.4.1 NAVTEX - Unscheduled Forecasts. Update NAVTEX forecasts only in the rarest of circumstances when a major modification is required. During a tropical cyclone event, the issuing office may delay the "scheduled" issuance of the NAVTEX until after advisories from the NHC, CPHC or Joint Typhoon Warning Center are issued. In these circumstances, the NAVTEX should be issued as soon as reasonably possible, but no later than 1 hour after receiving the appropriate hurricane center's advisory.

4.5 Updates, Amendments and Corrections. As NAVTEX is a single frequency system, each NAVTEX station and content provider takes measures to prevent mutual interference with

other stations. To avoid such mutual interference, each NAVTEX station is assigned specific time slots. When a NAVTEX broadcast may exceed the assigned broadcast period, or broadcast a warning at an unscheduled time, the NAVTEX station schedules arrangements with nearby stations to prevent potential mutual interference. Such rescheduling of broadcasts may result in an undesirable cascade effect, inhibiting the fundamental purpose of the NAVTEX system. Therefore, unscheduled broadcasts, and lengthy forecasts should be avoided. When changes are necessary, amendment codes (AAx) and update/correction codes (CCx) will be followed using NWSI 10-1701, section 4.1.

5 High Seas Forecast (product category HSF). The areas of high seas forecasts are explicitly defined by the World Meteorological Organization (WMO) and will not be modified without prior coordination with NWS headquarters, Office of Climate, Water, and Weather Services (OCWWS). The OPC, TAFB, and WFO Honolulu (HFO) are the HSF issuing offices of the NWS.

5.1 Mission Connection. The HSF provides warning and forecast information to mariners who travel on the oceanic waters. The NWS provides forecasts in our area of responsibility for mariners of the High Seas in both graphic and alphanumeric format.

5.2 Issuance Guidelines

5.2.1 Creation Software. OPC, TAFB and WFO HFO should produce the HSF using text editors where automated software formatters are not yet available.

5.2.2 Issuance Criteria. The HSF will be issued every six hours, including any marine warnings for gale, storm, and tropical cyclone conditions. Refer to NWSI 10-302, section 5, for a description of the areas covered in these forecasts.

5.2.3 Issuance Time. HSFs are routinely-scheduled products. OPC, TAFB and WFO HFO should issue HSFs based on the following:

Issuing Office	**Issuance Times (UTC)**				**Effective Until (UTC)**			
	Current Day				Day 2			
OPC / Atlantic	0430	1030	1630	2230	0000	0600	1200	1800
TAFB / Atlantic	0430	1030	1630	2230	0000	0600	1200	1800
TAFB / Pac. (N. of Equator)	0430	1030	1630	2230	0000	0600	1200	1800
OPC / Pacific	0430	1030	1630	2230	0000	0600	1200	1800
OPC / NHC / HFO Pacific	0545	1145	1745	2345	0000	0600	1200	1800
HFO / Pac. (N. of Equator)	0500	1100	1700	2300	0000	0600	1200	1800
TAFB / Pac. (S. of Equator)	0515	1115	1715	2315	0000	0600	1200	1800
HFO / Pac. (S. of Equator)	0530	1130	1730	2330	0000	0600	1200	1800

5.2.4 Valid Time. HSFs are valid from the time of issuance until the expiration time.

5.2.5 Product Expiration Time. HSFs are superseded by the next forecast issuance in 6 hours.

5.3 Technical Description. HSFs will follow the format and content described in this section.

5.3.1 MND Broadcast Line. None.

5.3.2 MND Header. The HSF MND Header is "HIGH SEAS FORECAST".

5.3.3 Content. To ensure understanding by users, only use the abbreviations noted in NWSI 10-303. Also, include in the header the appropriate "C Code" (CCODE) and WMO Meteorological Area (METAREA), as shown in NWSIs 10-302 and 10-304. Follow the format for the HSF as shown in section 5.4; examples of the HSF can be found in Appendix A.

The first part of the HSF describes WARNINGS in effect for systems with sustained winds of 34 KT or greater. The expected trends, movement and 24 hour, 48 hour forecast positions and conditions are described. The forecast has less detailed information than the OFF.

The second part of the HSF consists of the SYNOPSIS AND FORECAST section, which describes weather systems not meeting the warning criteria. The message describes the initial, 24 hour, and 48 hour forecast positions, along with associated conditions, if appropriate.

a. Securite / Pan Pan. The term SECURITE is an international communications code that indicates safety information follows. HSFs qualify as safety information; therefore SECURITE is routinely included in their heading. PAN PAN is an international communications code that indicates urgent information follows. Substitute the term PAN PAN instead of SECURITE whenever winds of 64 KT or greater are in the forecast within 48 hours. The wind speed of 64 KT is the determining factor, not the phenomenon (i.e., a hurricane or non-tropical storm) generating them.

b. Warnings. Include individual paragraphs listed by category of warning (hurricane, tropical storm, hurricane force wind, storm, gale, freezing spray, or volcano). In each

paragraph, include a synopsis taken from, as applicable, the latest synoptic surface analysis or the latest tropical cyclone forecast/advisory from the NHC or CPHC showing the following:

1. For tropical and subtropical cyclones, provide the appropriate warning headline (i.e., HURRICANE WARNING...), the cyclone's strength (tropical storm, or hurricane), and its identifier (name). The HSF will not include headlines for Tropical Depressions. Tropical Depressions will be included in the Synopsis and Forecast section if the initial, 24, and 48 hour forecast are below Tropical Storm and Hurricane status.

   The headline will be the highest tropical cyclone category for the 48 hour forecast. Forecasters may include forecast points out to 120 hours for tropical cyclones when conditions warrant and for which consistent guidance is available.

   In accordance with NWSI 10-601, it is highly recommended the following caveat be included in the warning section: "Forecast winds in and near active tropical cyclones should be used with caution due to uncertainty in forecast track, size, and intensity."

2. For all extratropical cyclones,

   a. the location of the center (in whole degrees of latitude and longitude);
   b. the central pressure (in millibars (mb));
   c. for each quadrant, the areal coverage (in NM from the center) of the various wind categories (storm, gale, etc.) and associated seas greater than 12 feet;
   d. the direction (eight points of the compass), speed of movement (KT), and trend in movement and / or intensity.

3. The central pressure (in mb) expected at 24 hours; include the tropical cyclone name.

4. The central pressure (in mb) expected at 48 hours; include the tropical cyclone name.

5. For non-tropical systems, initial and forecast locations of fronts and troughs associated with such warnings.

6. For Icing. When appropriate, include a headline for HEAVY FREEZING SPRAY in the HSF. An ice accretion rate of 2 cm / hour or greater is considered heavy freezing spray. See definitions in NWSI 10-303.

7. For Volcanic Ashfall Advisories. Forecasters should include an Ashfall Advisory headline without the word "WARNING" if there is a confirmed volcanic eruption or a volcano is in a state of heightened unrest which could significantly impact marine operations. If issued, include in the paragraph the name of the volcano, its location (the latitude / longitude position, and / or mountain range, and / or a distance from a major population center). If there was an eruption, state, "Xxxxx Volcano erupted" (where "Xxxxx" is the name of the volcano) and the most recent eruption time. If volcanic ash or debris has been reported on the surface of the ocean, include this in the advisory text, as well as the appropriate office name and phone number for further reports. It is imperative that any high seas headlines and statements about volcanic activity are coordinated with the WFO responsible for overlapping coastal waters areas.

Example:

…ASHFALL ADVISORY…
OKMOK VOLCANO AT POSITION 53.4N 168.2W IN THE CENTRAL ALEUTIAN ISLANDS 70 NM SW OF DUTCH HARBOR HAS ERUPTED AT 1437 UTC 9 FEBRUARY 2009. VOLCANIC ASH MAY BE REACHING THE SURFACE NEAR/IN THE VICINITY OF UMNAK ISLAND. ASH HAS BEEN REPORTED ON THE SURFACE OF THE OCEAN 30 NM S OF UMNAK ISLAND. MARINERS SHOULD EXERCISE CAUTION. IF MARINERS ENCOUNTER VOLCANIC ASH OR FLOATING VOLCANIC DEBRIS…YOU ARE ENCOURAGED TO REPORT THE OBSERVATION TO THE OCEAN PREDICTION CENTER BY CALLING 301- 683-1520.

These paragraphs are hierarchical in order listing the most intense system first followed by other systems in descending order of intensity:

a. Hurricane(s),
b. Hurricane Force Wind,
c. Tropical Storm(s),
d. Storm(s),
e. Gale(s),
f. Freezing Spray,
g. Volcano

If two or more storms have equal intensity categories, list the areas in descending order of importance or threat. Do not include severe local storm watches and warnings, and do not include small craft advisories in HSFs.

5.3.4 Synopsis and Forecast. In this part of the HSF, provide a brief description of the most significant synoptic-scale features found in the forecast area for which warnings are not needed. The format is similar to that used in the warning areas. The most recent surface analysis should be used as the Synopsis Valid Time. Use 48 hours from that Synopsis Valid Time as the Forecast Valid Time. Marine synopses for the high seas and offshore forecasts and MIMs may use descriptive terms for winds and seas consistent with the Beaufort scale as shown in the NWS glossary (http://www.weather.gov/glossary/).

5.3.5 HSF Forecast Parameters

a. Winds. Winds represent sustained conditions at 10 meters above the surface of the water. Describe forecast wind speeds with either one representative value or, when significant differences are expected, with a small (i.e., 5 to 10 KT) range of values for the affected area. Forecasters may give these in terms of distances from the low pressure center, distances from the front or trough, or by a polygon based description using latitude / longitude points. Differences in the radial extent of forecast winds around a low pressure center are usually distinguished by quadrant or semicircle. Forecasters need not include wind direction.

Forecasters should usually limit the description of winds to areas in which they are *greater than 20 KT***.** They may use a statement such as WINDS *20 KT OR LESS* for conditions elsewhere in the forecast area. These thresholds may be adjusted to account for climatology. *The disclaimer for the remainder of the forecast reads:*

REMAINDER AREA WINDS 20 KT OR LESS. SEAS LESS THAN 8 FT.

For the High Seas forecasts, do NOT use the term "WIND" in the singular, use "WINDS" instead.

b. Seas.

1. Describe significant wave heights with either one representative value or, when a large variation is expected, with an appropriate range of values for the affected area. Forecasters may give these in terms of distances from the low pressure center, distances from the front or trough, or by latitude / longitude. Differences in the radial extent of forecast seas around a low pressure center are usually distinguished by quadrant or semicircle.

2. Forecasters should usually limit the description of seas to areas in which they are 8 feet or higher. They may use a statement such as SEAS LESS THAN 8 FT for conditions elsewhere in the forecast area. These thresholds may be adjusted to account for climatology.

3. HSF products will include a statement that explains the seas forecast as the significant wave height which is the average of the highest 1/3 of the waves, and that individual waves may be more than twice as high. This

statement may be included after the forecast heading and before the safety message (ex., SECURITE, PAN PAN).

c. Significant Weather / Visibility. Include significant weather such as obstructions to visibility, thunderstorms, squalls, and ship icing.

For those HSFs covering areas south of 30°N, forecasters may include thunderstorm information associated with the Inter-tropical Convergence Zone (ITCZ) and monsoon trough.

Forecasters should emphasize visibilities expected to be less than 1 NM in the HSF. They should mention obstructions to vision below 1 NM if the condition is widespread enough to affect a significant portion of the forecast area. They may include specific distances. However, do not include cloud conditions in the HSF.

d. Icing. When appropriate, include a headline for HEAVY FREEZING SPRAY in the HSF. An ice accretion rate of 2 cm / hour or greater is considered heavy freezing spray. See definitions in NWSI 10-303.

5.4 Format. Formatting of the HSF will follow NWSI 10-1701, except as explicitly stated in NWSI 10-1704. This product is available in industry standard encoding and languages, and may include, but is not limited to, ASCII, XML, WML, and HTML. The following format will be used for the HSF.

(WMO ID) (ISSUANCE DATE TIME)
(AWIPS ID)

[CCODES] {Refer to NWSI 10-304 for details on CCODES}
HIGH SEAS FORECAST **[FOR METAREA (XXX) {XXX = IV, XII, or XVI}]**
[**bold** terms used exclusively in the AT1, EPI, and EP3 Meteorological Products]
NATIONAL WEATHER SERVICE (CITY)(STATE)
[National Centers should refer to NWSI 10-1701 for further guidance on headers.]
(SCHEDULED ISSUANCE TIME)UTC (DATE)
SUPERCEDED BY NEXT ISSUANCE IN 6 HOURS

SECURITE (OR PAN PAN)
ATLANTIC FROM 07N TO 31N W OF 35W INCLUDING CARIBBEAN SEA AND GULF OF MEXICO

SYNOPSIS VALID
24 HOUR FORECAST VALID (VALID TIME)UTC (DATE)
48 HOUR FORECAST VALID (END VALID TIME)UTC (DATE)

WARNINGS

TEXT...(INCLUDE EXTENDED OUTLOOK DURING HURRICANE SEASON)

SYNOPSIS AND FORECAST

Figure 4. High Seas Forecast (HSF) Format

5.4.1 HSF - Unscheduled Forecasts. HSFs should be updated when a significant change in weather conditions, adversely impacting high seas mariners, is expected and not already forecast.

5.5 SafetyNET Inmarsat-C. SafetyNET is an internationally adopted, automated satellite system for disseminating weather forecasts and warnings, marine navigational warnings and other safety related information to all types of vessels. Along with NAVTEX, it is part of the Global Maritime Distress and Safety System (GMDSS).

5.5.1 "C CODES". To control product dissemination of high seas forecasts broadcast via SafetyNET, a system of "C codes" is used. It is vital this format be followed explicitly. "C codes" take the following form and are located as in the following example:

FZNT01 KWBC 111613
HSFAT1

HIGH SEAS FORECAST FOR METAREA IV
NWS OCEAN PREDICTION CENTER WASHINGTON DC
1630 UTC FRI JUL 11 2008

CCODE/C1:C2:C3:C4:C5/SAT/NWS/CCODE
SUPERSEDED BY NEXT ISSUANCE IN 6 HOURS

(TEXT)

For routine HSFs:
HSFAT1 - CCODE/1:31:04:01:00/AOW/NWS/CCODE
HSFEPI - CCODE/1:31:12:01:00/AOW+POR/NWS/CCODE
HSFEP3 - CCODE/1:31:16:01:00/AOW/NWS/CCODE

For HSFs containing hurricane/typhoon warnings within 48 hours of the synoptic time:
HSFAT1 - CCODE/2:31:04:11:00/AOW+AOE/NWS/CCODE
HSFEPI - CCODE/2:31:12:11:00/AOW+POR+AOE/NWS/CCODE
HSFEP3 - CCODE/2:31:16:11:00/AOW+POR+AOE/NWS/CCODE

HSFs: HSFSP, HSFNP, HSFEP1, HSFEP2, and HSFAT2 are not broadcast individually over SafetyNET and will not contain CCODES, or the notation of METAREA.

5.5.2 Issuance Times
HSFs issued by NHC / TAFB or OPC, are broadcast via SafetyNET as shown below:

METAREA	Product ID	Satellite(s)	Broadcast Time (UTC)*
IV (Atlantic)	HSFAT1	AOW	0430, 1030, 1630, 2230
XII (Pacific)	HSFEPI	AOW+POR	0545, 1145, 1745, 2345
XVI (Off Peru)	HSFEP3	AOW	0515, 1115, 1715, 2315

* For proper operation of the SafetyNET "HIGHSEAS" transmission and monitoring system within the NWS Telecommunications Gateway (TG), these products should be issued no earlier than 1 hour before the scheduled broadcast time or later than the scheduled broadcast time.

5.6 Graphic Products. Appendix A lists graphic high seas products. Ensure these products are consistent with information contained in neighboring offices' compatible text and graphic products. These products are available in industry standard encoding and languages, and may include, but not limited to, ".tif," ".gif," and ".jpeg".

5.7 Updates, Amendments and Corrections. HSFs will be updated or corrected when the forecaster believes the current forecast is not representative, or when, in the forecaster's judgment, significant format or content errors are detected. If necessary, append either "...UPDATED" or "...CORRECTED" to the product header when disseminating a correction or amendment. Amendment codes (AAx) and update/correction codes (CCx) will be followed using NWSI 10-1701, section 4.1.

APPENDIX A - Examples of NWS Offshore, NAVTEX, and High Seas Forecasts

1 Graphics Products The following are official NWS graphic products:

ISSUING OFFICE	AREA	TYPE OF PRODUCT	VALID TIME (UTC)
OPC	ATL	Preliminary Surface Analysis	
		Surface Analysis	
		Sea State Surface Analysis	00
		Wind / Wave Analysis	
		500 mb Analysis	
		24 Hour Wind / Wave Forecast	
		24 Hour Surface Forecast	
		24 Hour 500 mb Forecast	
		36 Hour 500 mb Forecast	
		48 Hour Wind / Wave Forecast	
		48 Hr. Wave Period, with Ice accretion (seasonal)	
		48 Hour Surface Forecast	
		48 Hour 500 mb Forecast	
			03
		Wind / Wave Analysis	
			06
		Preliminary Surface Analysis	
		Surface Analysis	
		Wind / Wave Analysis	
			09
		Wind / Wave Analysis	
			12
		Preliminary Surface Analysis	
		Surface Analysis	
		Sea State Analysis	
		Wind / Wave Analysis	
OPC (cont.)	ATL	500 mb Analysis	

	(cont.)	24 Hour Wind / Wave Forecast		
		24 Hour Surface Forecast		
		24 Hour 500 mb Forecast		
		36 Hour 500 mb Forecast		
		48 Hour Wind / Wave Forecast		
		48 Hour Wave Period		
		48 Hour Surface Forecast		
		48 Hour 500 mb Forecast		
		96 Hour Surface Forecast		
		96 Hour 500 mb Forecast		
		96 Hour Wind / Wave Forecast		
		96 Hour Wave Period with Ice accretion (seasonal)		15
		Wind / Wave Analysis		18
		Preliminary Surface Analysis		
		Surface Analysis		
		Wind / Wave Analysis		21
	PAC	Wind / Wave Analysis		00
		Surface Analysis		
		Wind / Wave Analysis		
		500 mb Analysis		
		Sea State Analysis		
		24 Hour Wind / Wave Forecast		
		24 Hour Surface Forecast		
		48 Hour Wind / Wave Forecast		
		48 Hour Wave Period Forecast		
		48 Hour Surface Forecast		
		48 Hour 500 mb Forecast		
OPC (cont.)	PAC	SST Chart (40N-53N, East of		00 (cont.)

	(cont.)	136W)		
		SST Chart (23N-42N, East of 136W)		03
		Wind / Wave Analysis		06
		Surface Analysis Wind / Wave Analysis		09
		Wind / Wave Analysis		12
		Surface Analysis Wind / Wave Analysis 500 mb Analysis		
		24 Hour Wind / Wave Forecast 24 Hour Surface Forecast		
		48 Hour Wind / Wave Forecast 48 Hour Wave Period 48 Hour Surface Forecast 48 Hour 500 mb Forecast		
		96 Hour Surface Forecast 96 Hour 500 mb Forecast 96 Hour Wind / Wave Forecast 96 Hour Wave Period Forecast		15
		Wind / Wave Analysis		18
TAFB	ATL	Surface Analysis Wind / Wave Analysis		00
		Tropical Surface Analysis 00 Hour Sea State Analysis 24 Hour Surface Forecast 24 Hour Wind / Wave Forecast 48 Hour Surface Forecast		
NHC (cont.)	ATL	72 Hour Surface Forecast		00 (cont.)

	(cont.)	48 Hour Wind / Wave Forecast		
		72 Hour Wind / Wave Forecast		
		48 Hour Peak Wave Period / Swell Direction		
		72 Hour Peak Wave Period / Swell Direction		04
		High Wind and Associated Seas**		06
		Tropical Cyclone Danger Area*		10
		Tropical Surface Analysis		
		24 Hour Wind / Wave Forecast		12
		High Wind and Associated Seas**		
		Tropical Cyclone Danger Area*		
		Tropical Surface Analysis		
		00 Hour Sea State Analysis		
		24 Hour Surface Forecast		
		24 Hour Wind / Wave Forecast		
		48 Hour Surface Forecast		
		48 Hour Wind / Wave Forecast		16
		48 Hour Wave Period / Swell Direction		18
		72 Hour Surface Forecast		
		72 Hour Wind / Wave Forecast		
		High Wind and Associated Seas**		22
	PAC	Tropical Cyclone Danger Area*		00
		Tropical Surface Analysis		
		24 Hour Wind / Wave Forecast		
		High Wind and Associated Seas**		
		Tropical Cyclone Danger Area*		
TAFB (cont.)	PAC			00 (cont.)

	(cont.)	Tropical Surface Analysis		
		00 Hour Sea State Analysis		04
		24 Hour Wind / Wave Forecast		
		48 Hour Wind / Wave Forecast		06
		48 Hour Peak Wave Period/Swell Direction		
		72 Hour Wind / Wave Forecast		
		72 Hour Peak Wave Period / Swell Direction		
		High Wind and Associated Seas**		10
		24 Hour Surface Forecast		
		48 Hour Surface Forecast		12
		72 Hour Surface Forecast		
		Tropical Cyclone Danger Area*		
		24 Hour Wind / Wave Forecast		
		Tropical Surface Analysis		
		High Wind and Associated Seas**		
		Tropical Cyclone Danger Area*		
				16
		Tropical Surface Analysis		
		00 Hour Sea State Analysis		
		24 Hour Wind / Wave Forecast		18
		48 Hour Peak Wave Period / Swell Direction		
		48 Hour Wind / Wave Forecast		
		72 Hour Wind / Wave Forecast		
		High Wind and Associated Seas**		22
		24 Hour Surface Forecast		
		48 Hour Surface Forecast		
		72 Hour Surface Forecast		
		Tropical Cyclone Danger Area*		
Weather Forecast Office (WFO)	PAC	Tropical Surface Analysis		00

ANCHORAGE (AFC)		High Wind and Associated Seas**	
		24 Hour Wind / Wave Forecast	00 00
		Tropical Cyclone Danger Area*	
			00
WFO HONOLULU (HFO)	PAC		
		Sea Surface Temperature Analysis	00 0000
		120 Hour Sea Ice Forecast	
		Sea Ice Analysis	
		Surface Analysis	
			03 0606
		Surface Analysis	
			12
		Pacific Streamline Analysis	
		North Pacific Surface Pressure Analysis	
		24 Hour Wind / Wave Forecast	
		48 Hour Wind / Wave Forecast	12
		72 Hour Wind / Wave Forecast	
		24 Hour Surface Forecast	12
		48 Hour Surface Forecast	
		72 Hour Surface Forecast	
		Pacific Ocean Sea Surface Temps	12
		(Latest analysis – updated twice weekly) transmitted 2328Z	
			15 15

				Tropical Cyclone Danger Area*				18
				Pacific Streamline Analysis North Pacific Surface Pressure Analysis				18
				Pacific Ocean Sea Surface Temps (Latest analysis – updated twice weekly)				21
				Pacific Streamline Analysis North Pacific Surface Pressure Analysis				
				24 Hour Wind / Wave Forecast 48 Hour Wind / Wave Forecast 72 Hour Wind / Wave Forecast				
				24 Hour Surface Forecast 48 Hour Surface Forecast 72 Hour Surface Forecast				
				Significant Cloud Features Tropical Cyclone Danger Area*				
				Pacific Streamline Analysis North Pacific Surface Pressure Analysis				
				Tropical Cyclone Danger Area*				

* Tropical Cyclone Danger Area chart is prepared from May 15 to November 30.
** High Wind and Associated Seas chart is prepared from December 1 to May 14.

2 Offshore Waters Forecast (OFF)

FZAK61 PAFC 211250
OFFAER

OFFSHORE WATERS FORECAST
NATIONAL WEATHER SERVICE ANCHORAGE AK
400 AM AKST WED DEC 21 2011

OFFSHORE WATERS FORECAST FOR THE GULF OF ALASKA WEST OF 144W

WIND FORECASTS REFLECT THE PREDOMINANT SPEED AND DIRECTION EXPECTED. SEA FORECASTS REPRESENT AN AVERAGE OF THE HIGHEST ONE-THIRD OF THE COMBINED WIND WAVE AND SWELL HEIGHT.

PKZ399-220300-
400 AM AKST WED DEC 21 2011
.SYNOPSIS FOR THE WESTERN GULF OF ALASKA...
WEAK HIGH PRESSURE WILL BUILD INTO THE GULF TODAY. A PACIFIC LOW WILL MOVE TO 54N 147W AT 975 MB LATE WED NIGHT. THE LOW THEN MOVES TO NEAR PRINCE WILLIAM SOUND AT SAME INTENSITY THU AFTERNOON AND WEAKENS IN PLACE TO 985 MB BY LATE THU NIGHT.

$$

PKZ351-220300-
GULF OF ALASKA OFFSHORE NORTH OF 57N AND WEST OF 144W
400 AM AKST WED DEC 21 2011

...GALE WARNING TONIGHT AND THURSDAY...

.TODAY...SW WIND 20 KT BECOMING NE 15 KT IN THE AFTERNOON. SEAS 19 FT SUBSIDING TO 14 FT IN THE AFTERNOON. RAIN.
.TONIGHT...NE WIND 30 KT INCREASING TO 40 KT AFTER MIDNIGHT. SEAS 12 FT. RAIN AND SNOW SHOWERS.
.THU...N WIND 45 KT EXCEPT S 30 KT E OF 146W. SEAS 13 FT. RAIN AND SNOW SHOWERS.
.THU NIGHT...W WIND 30 TO 40 KT. SEAS 17 FT.
.FRI...N WIND 20 KT. SEAS 15 FT.
.SAT...NE WIND 25 KT. SEAS 15 FT.
.SUN...W WIND 30 KT. SEAS 14 FT.

$$

PKZ352-220300-
GULF OF ALASKA OFFSHORE SOUTH OF 57N NORTH OF 55N AND WEST OF 144W
400 AM AKST WED DEC 21 2011

...GALE WARNING TONIGHT AND THURSDAY...

.TODAY...W WIND 15 KT BECOMING NE 25 KT IN THE AFTERNOON. SEAS 18 FT. RAIN AND SNOW.
.TONIGHT...NE WIND 40 KT EXCEPT SE 25 KT E OF 146W. SEAS 13 FT. RAIN AND SNOW SHOWERS.
.THU...NW WIND 45 KT EXCEPT SE 25 KT E OF 145W. SEAS 15 FT. RAIN AND SNOW.
.THU NIGHT...W WIND 35 KT. SEAS 16 FT.
.FRI...NW WIND 30 KT. SEAS 18 FT.
.SAT...NW WIND 25 KT. SEAS 16 FT.
.SUN...W WIND 25 KT. SEAS 17 FT.

$$

FZNT21 KWBC 221940
OFFNT1

OFFSHORE WATERS FORECAST
NWS OCEAN PREDICTION CENTER WASHINGTON DC
340 PM EDT THU MAY 22 2014

NEW ENGLAND CONTINENTAL SHELF AND SLOPE WATERS FROM 25 NM OFFSHORE TO THE HAGUE LINE...EXCEPT TO 1000 FM S OF NEW ENGLAND

SEAS GIVEN AS SIGNIFICANT WAVE HEIGHT...WHICH IS THE AVERAGE HEIGHT OF THE HIGHEST 1/3 OF THE WAVES. INDIVIDUAL WAVES MAY BE MORE THAN TWICE THE SIGNIFICANT WAVE HEIGHT.

ANZ898-230845-
340 PM EDT THU MAY 22 2014

.SYNOPSIS FOR NEW ENGLAND WATERS...DEVELOPING LOW PRES WILL PASS S OF THE AREA THIS EVENING. ANOTHER WEAK DEVELOPING LOW WILL SLOWLY PASS S OF THE WATERS LATER TONIGHT INTO SAT. A HIGH PRES RIDGE WILL BUILD E OVER THE AREA LATE SAT THROUGH SUN NIGHT...THEN PASS SE OF THE WATERS MON. A COLD FRONT WILL APPROACH THE NEW ENGLAND COAST MON INTO TUE...THEN WILL MOVE SE THROUGH THE WATERS LATE TUE AND TUE NIGHT.

$$

ANZ800-230845-
GULF OF MAINE TO THE HAGUE LINE-
340 PM EDT THU MAY 22 2014

.TONIGHT...VARIABLE WINDS LESS THAN 10 KT...BECOMING E LATE. SEAS 1 TO 3 FT...HIGHEST SE. CHANCE OF SHOWERS. AREAS OF FOG WITH VSBY 1 NM OR LESS.
.FRI...E WINDS 5 TO 10 KT...BECOMING 5 TO 15 KT LATE. SEAS 1 TO 3 FT...HIGHEST S. CHANCE OF SHOWERS.
.FRI NIGHT...E WINDS 5 TO 15 KT...BECOMING NE 10 TO 20 KT LATE. SEAS 2 TO 4 FT.
.SAT...NE WINDS 15 TO 20 KT. SEAS 3 TO 4 FT.
.SAT NIGHT...N TO NE WINDS 15 TO 20 KT...DIMINISHING TO 5 TO 15 KT LATE. SEAS 2 TO 4 FT.
.SUN...N TO NE WINDS 5 TO 15 KT...BECOMING VARIABLE LESS THAN 10 KT LATE. SEAS 2 TO 4 FT.
.SUN NIGHT...SW WINDS 5 TO 10 KT...BECOMING 10 TO 15 KT LATE. SEAS 2 TO 4 FT.
.MON...SW WINDS 10 TO 15 KT...BECOMING S TO SW 15 TO 20 KT LATE. SEAS 3 TO 5 FT.
.MON NIGHT...SW WINDS INCREASING TO 20 TO 25 KT. SEAS 4 TO 7 FT...HIGHEST E.
.TUE...SW WINDS 15 TO 25 KT. SEAS 5 TO 8 FT.
.TUE NIGHT...WINDS BECOMING N TO NW 15 TO 25 KT. SEAS 4 TO 7 FT...HIGHEST SE.

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ANZ805-230845-
GEORGES BANK BETWEEN CAPE COD AND 68W NORTH OF 1000 FM-
340 PM EDT THU MAY 22 2014

.TONIGHT...S TO SE WINDS 5 TO 10 KT...BECOMING VARIABLE EARLY...THEN...BECOMING E LATE. SEAS 2 TO 4 FT. SCATTERED SHOWERS AND CHANCE OF TSTMS.
.FRI...E WINDS 5 TO 15 KT. SEAS 2 TO 4 FT. CHANCE OF SHOWERS.
.FRI NIGHT...E TO NE WINDS INCREASING TO 15 TO 25 KT. SEAS BUILDING TO 4 TO 6 FT. SCATTERED SHOWERS AND CHANCE OF TSTMS.
.SAT...N TO NE WINDS 15 TO 25 KT. SEAS 4 TO 7 FT...HIGHEST S.
.SAT NIGHT...N WINDS 10 TO 20 KT...DIMINISHING TO 5 TO 15 KT LATE. SEAS 4 TO 6 FT.
.SUN...N TO NE WINDS 5 TO 15 KT...DIMINISHING TO LESS THAN 10 KT LATE. SEAS 3 TO 4 FT.
.SUN NIGHT...VARIABLE WINDS LESS THAN 10 KT...BECOMING S TO SW LATE. SEAS 3 TO 4 FT.
.MON...S TO SW WINDS 5 TO 15 KT...INCREASING TO 10 TO 20 KT LATE. SEAS 3 TO 5 FT.
.MON NIGHT...SW WINDS 15 TO 25 KT. SEAS BUILDING TO 5 TO 7 FT.
.TUE...SW WINDS 20 TO 25 KT. SEAS 6 TO 9 FT.

.TUE NIGHT...W TO SW WINDS 15 TO 25 KT...BECOMING NW 15 TO 20 KT LATE. SEAS SUBSIDING TO 5 TO 7 FT.

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ANZ900-230845-
GEORGES BANK BETWEEN 68W AND THE HAGUE LINE-
340 PM EDT THU MAY 22 2014

.TONIGHT...S WINDS LESS THAN 10 KT...BECOMING VARIABLE EARLY...THEN...BECOMING E LATE. SEAS 2 TO 3 FT. ISOLATED SHOWERS.
.FRI...E WINDS 5 TO 10 KT...BECOMING 5 TO 15 KT LATE. SEAS 3 TO 4 FT. CHANCE OF SHOWERS.
.FRI NIGHT...E WINDS 10 TO 20 KT. SEAS 3 TO 5 FT. SCATTERED SHOWERS.
.SAT...NE WINDS 15 TO 25 KT. SEAS 4 TO 7 FT. CHANCE OF SHOWERS IN THE MORNING.
.SAT NIGHT...N WINDS 15 TO 20 KT...BECOMING 10 TO 15 KT LATE. SEAS 4 TO 7 FT.
.SUN...N WINDS 5 TO 15 KT. SEAS 3 TO 5 FT.
.SUN NIGHT...N WINDS LESS THAN 10 KT...BECOMING VARIABLE LATE. SEAS 3 TO 4 FT.
.MON...S TO SW WINDS 5 TO 15 KT...BECOMING S 10 TO 20 KT LATE. SEAS 3 TO 4 FT.
.MON NIGHT...SW WINDS INCREASING TO 20 TO 25 KT. SEAS BUILDING TO 5 TO 7 FT.
.TUE...SW WINDS 20 TO 25 KT. SEAS 6 TO 9 FT.
.TUE NIGHT...W TO SW WINDS 15 TO 25 KT...BECOMING NW 15 TO 20 KT LATE. SEAS 7 TO 10 FT SUBSIDING TO 6 TO 8 FT.

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ANZ810-230845-
SOUTH OF NEW ENGLAND BETWEEN THE GREAT SOUTH CHANNEL AND MONTAUK
POINT TO 1000 FM-
340 PM EDT THU MAY 22 2014

.TONIGHT...SE WINDS 5 TO 15 KT...BECOMING E LATE. SEAS 2 TO 4 FT. SCATTERED SHOWERS AND TSTMS.
.FRI...E WINDS 5 TO 15 KT...INCREASING TO 10 TO 20 KT LATE. SEAS 3 TO 4 FT. SCATTERED SHOWERS.
.FRI NIGHT...E WINDS 10 TO 20 KT...INCREASING TO NE 15 TO 25 KT LATE. SEAS BUILDING TO 4 TO 6 FT. SCATTERED SHOWERS AND TSTMS.
.SAT...NE WINDS 20 TO 25 KT...BECOMING N 15 TO 25 KT LATE. SEAS 5 TO 7 FT. CHANCE OF SHOWERS IN THE MORNING.
.SAT NIGHT...N WINDS 10 TO 20 KT...DIMINISHING TO 5 TO 15 KT LATE. SEAS SUBSIDING TO 3 TO 5 FT.

.SUN...N WINDS LESS THAN 10 KT...BECOMING VARIABLE LATE. SEAS 3 TO 5 FT.
.SUN NIGHT...E TO SE WINDS LESS THAN 10 KT...BECOMING S TO SE LATE. SEAS 2 TO 4 FT.
.MON...SW WINDS LESS THAN 10 KT...INCREASING TO 10 TO 20 KT LATE. SEAS 2 TO 4 FT.
.MON NIGHT...SW WINDS INCREASING TO 20 TO 25 KT. SEAS BUILDING TO 5 TO 7 FT.
.TUE...SW WINDS 15 TO 25 KT. SEAS 5 TO 9 FT...HIGHEST SE.
.TUE NIGHT...W TO SW WINDS 15 TO 25 KT...BECOMING N TO NW 10 TO 20 KT LATE. SEAS SUBSIDING TO 4 TO 6 FT.

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ANZ815-230845-
SOUTH OF LONG ISLAND BETWEEN MONTAUK POINT AND SANDY HOOK TO 1000 FM-
340 PM EDT THU MAY 22 2014

.TONIGHT...SE WINDS 10 TO 15 KT...BECOMING S TO SE 5 TO 15 KT EARLY...THEN...BECOMING VARIABLE LATE. SEAS 2 TO 4 FT. SCATTERED SHOWERS AND TSTMS. AREAS OF FOG WITH VSBY 1 NM OR LESS LATE.
.FRI...N TO NW WINDS 5 TO 15 KT. SEAS 2 TO 4 FT.
.FRI NIGHT...NW WINDS 5 TO 15 KT...BECOMING N TO NE AND INCREASING TO 15 TO 25 KT LATE. SEAS 3 TO 5 FT. SCATTERED SHOWERS AND TSTMS.
.SAT...N TO NE WINDS 15 TO 25 KT...DIMINISHING TO 5 TO 15 KT LATE. SEAS 3 TO 6 FT...HIGHEST SE.
.SAT NIGHT...N TO NE WINDS 5 TO 15 KT...BECOMING VARIABLE LATE. SEAS 3 TO 5 FT.
.SUN...VARIABLE WINDS LESS THAN 10 KT. SEAS 2 TO 4 FT.
.SUN NIGHT...VARIABLE WINDS LESS THAN 10 KT...BECOMING S TO SW LATE. SEAS 2 TO 3 FT.
.MON...SW WINDS 5 TO 10 KT...INCREASING TO 15 KT LATE. SEAS 2 TO 4 FT.
.MON NIGHT...SW WINDS INCREASING TO 15 TO 25 KT. SEAS BUILDING TO 4 TO 6 FT.
.TUE...SW WINDS 10 TO 20 KT. SEAS 3 TO 6 FT...HIGHEST SE.
.TUE NIGHT...W WINDS 15 TO 20 KT...BECOMING N 10 TO 20 KT LATE. SEAS 3 TO 5 FT.

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.FORECASTER CLARK. OCEAN PREDICTION CENTER.

Example of an OFF when there is an active Tropical Cyclone:

FZNT24 KNHC 272121
OFFNT4

OFFSHORE WATERS FORECAST FOR THE GULF OF MEXICO
NWS NATIONAL HURRICANE CENTER MIAMI FL
521 PM EDT MON AUG 27 2012

OFFSHORE WATERS FORECAST FOR THE GULF OF MEXICO

SEAS GIVEN AS SIGNIFICANT WAVE HEIGHT...WHICH IS THE AVERAGE HEIGHT OF THE HIGHEST 1/3 OF THE WAVES. INDIVIDUAL WAVES MAY BE MORE THAN TWICE THE SIGNIFICANT WAVE HEIGHT.

GMZ001-280830-
SYNOPSIS FOR THE GULF OF MEXICO
521 PM EDT MON AUG 27 2012

.SYNOPSIS....TROPICAL STORM ISAAC CENTERED NEAR 26.4N 86.2W AT 2100 UTC. MAXIMUM SUSTAINED WINDS 60 KT GUSTS TO 75 KT MOVING NW 10 KT WITH MINIMUM CENTRAL PRES 981 MB. ISAAC IS FORECAST TO INTENSIFY TO A HURRICANE TONIGHT NEAR 27.4N 87.5W. ISAAC WILL CONTINUE TO MOVE NW TO 28.6N 89.0W TUE AND NEAR THE COAST AT 29.5N 90.0W TUE NIGHT AND MOVE INLAND ALONG THE LOUISIANA COAST WED AND WEAKEN TO A TROPICAL STORM THU AND A TROPICAL DEPRESSION FRI.

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GMZ011-280830-
NW GULF INCLUDING STETSON BANK-
521 PM EDT MON AUG 27 2012

.TONIGHT...NE WINDS 5 TO 10 KT...BECOMING N 10 TO 15 KT LATE. SEAS 4 TO 6 FT.
.TUE...NW WINDS 10 TO 15 KT. SEAS 6 TO 9 FT.
.TUE NIGHT...NW WINDS 10 TO 15 KT...BECOMING W TO NW 15 TO 20 KT LATE. SEAS 6 TO 9 FT.
.WED...W TO NW WINDS 15 TO 20 KT. SEAS 5 TO 7 FT. SCATTERED SHOWERS AND ISOLATED TSTMS.
.WED NIGHT...W WINDS 10 TO 15 KT. SEAS 5 TO 7 FT. SCATTERED SHOWERS AND ISOLATED TSTMS.
.THU...SW TO W WINDS 15 TO 20 KT...BECOMING W 10 TO 15 KT LATE. SEAS 4 TO 6 FT.
.THU NIGHT...S TO SW WINDS 10 KT...BECOMING S LATE. SEAS 3 TO 5 FT.
.FRI...S WINDS 10 TO 15 KT. SEAS 3 TO 5 FT.
.FRI NIGHT...SE TO S WINDS 10 TO 15 KT. SEAS 4 TO 6 FT.

.SAT...SE TO S WINDS 10 TO 15 KT. SEAS 4 TO 6 FT.

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GMZ013-280830-
N CENTRAL GULF INCLUDING FLOWER GARDEN BANKS MARINE SANCTUARY-
521 PM EDT MON AUG 27 2012

...HURRICANE WARNING...

.TONIGHT...HURRICANE CONDITIONS EXPECTED. E OF 90W...N WINDS 45 TO 55 KT...BECOMING NW TO N 55 TO 65 KT LATE. W OF 90W...N TO NE WINDS 20 TO 25 KT...BECOMING NW TO N 35 TO 40 KT LATE. SEAS 17 TO 27 FT E OF 90W...AND 10 TO 15 FT W OF 90W. SCATTERED SHOWERS AND ISOLATED TSTMS. VSBY 1 NM OR LESS.
.TUE...HURRICANE CONDITIONS EXPECTED. E OF 90W...SW TO W WINDS 60 TO 70 KT...BECOMING SW 40 TO 50 KT LATE. W OF 90W...NW WINDS 40 TO 45 KT. SEAS 18 TO 28 FT E OF 90W...AND 13 TO 18 FT W OF 90W. SCATTERED SHOWERS AND ISOLATED TSTMS. VSBY 1 NM OR LESS.
.TUE NIGHT...TROPICAL STORM CONDITIONS EXPECTED. W WINDS 40 TO 45 KT...BECOMING SW TO W 35 TO 40 KT LATE. E OF 90W...SEAS 22 FT...SUBSIDING TO 19 FT LATE. W OF 90W...SEAS 10 TO 15 FT. SCATTERED SHOWERS AND ISOLATED TSTMS.
.WED...TROPICAL STORM CONDITIONS EXPECTED. SW TO W WINDS 30 TO 35 KT...DIMINISHING TO 25 TO 30 KT LATE. SEAS 15 TO 20 FT E OF 90W...AND 10 TO 15 FT W OF 90W. SCATTERED SHOWERS AND ISOLATED TSTMS.
.WED NIGHT...SW WINDS 25 TO 30 KT. SEAS 10 TO 15 FT. SCATTERED SHOWERS AND ISOLATED TSTMS.
.THU...SW WINDS 20 TO 25 KT. SEAS 8 TO 11 FT.
.THU NIGHT...S TO SW WINDS 15 TO 20 KT. SEAS 6 TO 9 FT.
.FRI...S WINDS 10 TO 15 KT. SEAS 5 TO 7 FT.
.FRI NIGHT...SE TO S WINDS 10 TO 15 KT. SEAS 4 TO 6 FT.
.SAT...SE WINDS 10 TO 15 KT...DIMINISHING TO 5 TO 10 KT LATE. SEAS 4 TO 6 FT.

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GMZ015-280830-
NE GULF N OF 25N E OF 87W-
521 PM EDT MON AUG 27 2012

...HURRICANE WARNING...

.TONIGHT...TROPICAL STORM CONDITIONS. N OF 27N...E WINDS 45 TO 55 KT...BECOMING SE 55 TO 65 KT LATE. S OF 27N...S WINDS 50 TO 60 KT...BECOMING S TO SW 35 TO 45 KT LATE. SEAS 17 TO 27 FT N OF 27N...AND 17 TO 22 FT S OF 27N. SCATTERED SHOWERS AND ISOLATED TSTMS. VSBY 1 NM OR LESS.

.TUE...TROPICAL STORM CONDITIONS EXPECTED. N OF 27N...SE TO S WINDS 35 TO 45 KT...BECOMING S 30 TO 35 KT LATE...SEAS 18 TO 28 FT. S OF 27N...S TO SW WINDS 30 TO 35 KT...DIMINISHING TO 25 TO 30 KT LATE...SEAS 18 FT...SUBSIDING TO 15 FT LATE. SCATTERED SHOWERS AND ISOLATED TSTMS.
.TUE NIGHT...TROPICAL STORM CONDITIONS EXPECTED. N OF 27N...S WINDS 30 TO 35 KT...DIMINISHING TO 25 TO 30 KT LATE...SEAS 21 FT...SUBSIDING TO 18 FT LATE. S OF 27N...S WINDS 20 TO 25 KT. SEAS 10 TO 15 FT. SCATTERED SHOWERS AND ISOLATED TSTMS.
.WED...S WINDS 25 TO 30 KT. SEAS 14 TO 19 FT N OF 27N...AND 9 TO 14 FT S OF 27N. SCATTERED SHOWERS AND ISOLATED TSTMS.
.WED NIGHT...S WINDS 20 TO 25 KT. SEAS 11 TO 16 FT N OF 27N...AND 8 TO 11 FT S OF 27N. SCATTERED SHOWERS AND ISOLATED TSTMS.
.THU...S WINDS 20 TO 25 KT. SEAS 8 TO 11 FT WITH NW SWELL.
.THU NIGHT...SE TO S WINDS 15 TO 20 KT. SEAS 6 TO 9 FT WITH NW SWELL.
.FRI...SE WINDS 10 TO 15 KT. SEAS 5 TO 7 FT WITH N SWELL.
.FRI NIGHT...E TO SE WINDS 10 TO 15 KT. SEAS 3 TO 5 FT.
.SAT...E TO SE WINDS 10 TO 15 KT...BECOMING E 5 TO 10 KT LATE. SEAS 2 TO 4 FT.

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GMZ017-280830-
W CENTRAL GULF FROM 22N TO 26N W OF 94W-
521 PM EDT MON AUG 27 2012

.TONIGHT...N WINDS 5 TO 10 KT. SEAS 4 TO 6 FT WITH SE SWELL.
.TUE...NW WINDS 10 TO 15 KT. SEAS 6 TO 8 FT WITH E SWELL.
.TUE NIGHT...N WINDS 10 TO 15 KT...BECOMING SW 5 TO 10 KT LATE. SEAS 6 TO 9 FT WITH E SWELL.
.WED...SW TO W WINDS 10 TO 15 KT. SEAS 5 TO 7 FT WITH NE SWELL. SCATTERED SHOWERS AND ISOLATED TSTMS.
.WED NIGHT...S TO SW WINDS 10 TO 15 KT. SEAS 3 TO 5 FT.
.THU...S TO SW WINDS 10 TO 15 KT. SEAS 3 TO 5 FT.
.THU NIGHT...SE TO S WINDS 10 TO 15 KT. SEAS 2 TO 4 FT.
.FRI...SE TO S WINDS 10 TO 15 KT. SEAS 2 TO 4 FT.
.FRI NIGHT...E TO SE WINDS 10 TO 15 KT...BECOMING SE 15 TO 20 KT LATE. SEAS 4 TO 6 FT.
.SAT...SE WINDS 10 TO 15 KT. SEAS 4 TO 6 FT.

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GMZ019-280830-
CENTRAL GULF FROM 22N TO 26N BETWEEN 87W AND 94W-
521 PM EDT MON AUG 27 2012

...TROPICAL STORM WARNING...

.TONIGHT...TROPICAL STORM CONDITIONS. N OF 24N...N WINDS 40 TO 45 KT...BECOMING NW 30 TO 35 KT LATE. S OF 24N...N WINDS 20 TO 25 KT... BECOMING W TO NW 15 TO 20 KT LATE. SEAS 12 TO 17 FT N OF 24N...AND 8 TO 13 FT S OF 24N. SCATTERED SHOWERS AND ISOLATED TSTMS.
.TUE...TROPICAL STORM CONDITIONS POSSIBLE. N OF 24N...W WINDS 25 TO 30 KT. SEAS 10 TO 15 FT. S OF 24N...W WINDS 15 TO 20 KT...SEAS 8 TO 11 FT.
.TUE NIGHT...N OF 24N...SW TO W WINDS 20 TO 25 KT. SEAS 8 TO 13 FT. S OF 24N...SW WINDS 10 TO 15 KT. SEAS 6 TO 9 FT.
.WED...SW WINDS 20 TO 25 KT N OF 24N...AND SW 10 TO 15 KT S OF 24N. SEAS 7 TO 10 FT. SCATTERED SHOWERS AND ISOLATED TSTMS.
.WED NIGHT...S TO SW WINDS 15 TO 20 KT. SEAS 7 TO 10 FT N OF 24N N OF 24N...AND 5 TO 7 FT S OF 24N.
.THU...S WINDS 15 TO 20 KT. SEAS 6 TO 8 FT.
.THU NIGHT...SE TO S WINDS 15 TO 20 KT. SEAS 5 TO 7 FT.
.FRI...SE WINDS 10 TO 15 KT. SEAS 4 TO 6 FT.
.FRI NIGHT...E TO SE WINDS 15 TO 20 KT. SEAS 4 TO 6 FT.
.SAT...E TO SE WINDS 15 TO 20 KT...DIMINISHING TO 10 TO 15 KT LATE. SEAS 4 TO 6 FT.

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GMZ021-280830-
E GULF FROM 22N TO 25N E OF 87W INCLUDING STRAITS OF FLORIDA-
521 PM EDT MON AUG 27 2012

...TROPICAL STORM WARNING...

.TONIGHT...TROPICAL STORM CONDITIONS EXPECTED. STRAITS OF FLORIDA...SW WINDS 20 TO 25 KT...BECOMING S TO SW 15 TO 20 KT LATE. ELSEWHERE...W WINDS 30 TO 35 KT...BECOMING S TO SW 20 TO 25 KT LATE. SEAS 8 TO 11 FT STRAITS OF FLORIDA...AND 11 TO 16 FT ELSEWHERE. SCATTERED SHOWERS AND ISOLATED TSTMS.
.TUE...STRAITS OF FLORIDA...S WINDS 15 TO 20 KT...BECOMING S TO SW 10 TO 15 KT LATE. ELSEWHERE...S TO SW WINDS 20 TO 25 KT. SEAS 6 TO 9 FT STRAITS OF FLORIDA...AND 8 TO 13 FT ELSEWHERE. SCATTERED SHOWERS AND ISOLATED TSTMS.
.TUE NIGHT...STRAITS OF FLORIDA...S WINDS 5 TO 10 KT...BECOMING SE TO S 10 TO 15 KT LATE. ELSEWHERE...S WINDS 15 TO 20 KT. SEAS 7 TO 10 FT. SCATTERED SHOWERS AND ISOLATED TSTMS.
.WED...S WINDS 15 TO 20 KT. SEAS 7 TO 10 FT. SCATTERED SHOWERS AND ISOLATED TSTMS.
.WED NIGHT...SE TO S WINDS 10 TO 15 KT...INCREASING TO 15 TO 20 KT LATE. SEAS 6 TO 8 FT. SCATTERED SHOWERS AND ISOLATED TSTMS.
.THU...SE TO S WINDS 15 TO 20 KT...DIMINISHING TO 10 TO 15 KT LATE. SEAS 5 TO 7 FT.

.THU NIGHT...SE WINDS 10 TO 15 KT...INCREASING TO 15 TO 20 KT LATE. SEAS 4 TO 6 FT.
.FRI...E TO SE WINDS 10 TO 15 KT. SEAS 4 TO 6 FT.
.FRI NIGHT...E WINDS 10 TO 15 KT. SEAS 3 TO 5 FT.
.SAT...E WINDS 10 TO 15 KT. SEAS 3 TO 5 FT.

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GMZ023-280830-
SW GULF S OF 22N W OF 94W-
521 PM EDT MON AUG 27 2012

.TONIGHT...NW TO N WINDS 5 TO 10 KT. S EAS 3 TO 5 FT. SCATTERED SHOWERS AND ISOLATED TSTMS.
.TUE...NW WINDS 5 TO 10 KT. SEAS 4 TO 6 FT.
.TUE NIGHT...N TO NE WINDS 5 TO 10 KT...SHIFTING TO S LATE. SEAS 5 TO 7 FT.
.WED...S WINDS 5 TO 10 KT. SEAS 5 TO 7 FT.
.WED NIGHT...E TO SE WINDS 5 TO 10 KT...BECOMING SE 10 TO 15 KT LATE. SEAS 3 TO 5 FT.
.THU...SE TO S WINDS 5 TO 10 KT. SEAS 2 TO 4 FT.
.THU NIGHT...E WINDS 5 TO 10 KT...BECOMING SE 10 TO 15 KT LATE. SEAS 2 TO 4 FT.
.FRI...SE WINDS 10 TO 15 KT. SEAS 3 TO 5 FT.
.FRI NIGHT...E TO SE WINDS 10 TO 15 KT. SEAS 3 TO 5 FT.
.SAT...SE WINDS 10 TO 15 KT. SEAS 3 TO 5 FT.

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GMZ025-280830-
E BAY OF CAMPECHE INCLUDING CAMPECHE BANK-
521 PM EDT MON AUG 27 2012

.TONIGHT...N TO NE WINDS 10 TO 15 KT...BECOMING NW 5 TO 10 KT LATE. SEAS 2 TO 3 FT WITHIN 60 NM OF COAST OF CAMPECHE...AND 4 TO 6 FT ELSEWHERE.
.TUE...W TO NW WINDS 5 TO 10 KT. SEAS 2 TO 3 FT WITHIN 60 NM OF COAST OF CAMPECHE...AND 5 TO 7 FT ELSEWHERE.
.TUE NIGHT...WITHIN 60 NM OF COAST OF CAMPECHE...SE TO S LATE. NW TO N WINDS 5 TO 10 KT. ELSEWHERE...S 10 TO 15 KT LATE. SEAS 2 TO 4 FT WITHIN 60 NM OF COAST OF CAMPECHE...AND 5 TO 7 FT ELSEWHERE.
.WED...S TO SW WINDS 5 TO 10 KT. SEAS 2 TO 3 FT WITHIN 60 NM OF COAST OF CAMPECHE...AND 4 TO 6 FT ELSEWHERE.
.WED NIGHT...N TO NE WINDS 10 TO 15 KT...SHIFTING TO SE LATE. SEAS 3 TO 5 FT.
.THU...SE WINDS 10 TO 15 KT. SEAS 2 TO 4 FT.
.THU NIGHT...WITHIN 60 NM OF COAST OF CAMPECHE...NE TO E WINDS 5 TO 10 KT...BECOMING E TO SE 10 TO 15 KT LATE. ELSEWHERE...E TO SE WINDS 15 TO 20 KT. SEAS 3 TO 5 FT.

.FRI...E TO SE WINDS 10 TO 15 KT. SEAS 3 TO 5 FT.
.FRI NIGHT...E TO SE WINDS 15 TO 20 KT. SEAS 3 TO 5 FT.
.SAT...SE WINDS 15 TO 20 KT...BECOMING E TO SE 10 TO 15 KT LATE. SEAS 3 TO 5 FT.

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FORECASTER COBB

NATIONAL WEATHER SERVICE HONOLULU HI
PHZ105-140400-
1200 PM HST MON AUG 13 2007

.SYNOPSIS FOR HAWAIIAN OFFSHORE WATERS...
THE CENTER OF HURRICANE FLOSSIE WILL PASS SOUTH OF THE BIG ISLAND OF HAWAII TUESDAY AND CONTINUE MOVING SOUTH OF THE OTHER MAIN HAWAIIAN ISLANDS WEDNESDAY THROUGH THURSDAY. A HIGH FAR NORTH OF THE ISLANDS WILL MOVE SOUTHEAST AND WEAKEN THROUGH THE PERIOD. AT 1100 AM HST HURRICANE FLOSSIE WAS CENTERED AT 15.3N 150.6W...MOVING WEST NORTHWEST AT 13 KT.

FLOSSIE FORECAST POSITIONS
800 PM MONDAY 16.1N 152.4W
800 AM TUESDAY 17.0N 154.7W
800 PM TUESDAY 17.9N 156.8W
800 AM WEDNESDAY 18.6N 158.9W
800 AM THURSDAY 20.1N 163.0W

3 Marine Weather Discussion (MIM)

AGNT40 KWNM 040712
MIMATN

MARINE WEATHER DISCUSSION FOR N ATLANTIC OCEAN
NWS OCEAN PREDICTION CENTER WASHINGTON DC
312 AM EDT FRI APR 4 2014

.FORECAST DISCUSSION: MAJOR FEATURES/WINDS/SEAS/SIGNIFICANT WEATHER FOR THE NORTH ATLANTIC OCEAN W OF 50W FROM 30N TO 50N.

THE NEW GFS MAINTAINS FCST CONSISTENCY THROUGH THE WEEKEND. GLOBAL MODELS IN VERY GOOD AGREEMENT ON FRONT NEAR HATTERAS CANYON BEGINNING TO LIFT N ACROSS THE WATERS TODAY THEN CONTINUE NE TNGT AND SAT. WITH TRIPLE POINT LOW DVLPNG NR HUDSON CANYON TNGT THEN TRACKING ACROSS THE GULF OF MAINE SAT. SE WINDS WL INCRS TO 20 TO 30 KT AHD OF THE FRONT IN THE WARM STABLE FLOW. AS THE SFC LOW DEEPENS AND MOVES INTO THE GULF OF ST LWRNC...GFS/ECMWF/UKMET AGREE ON POST FRONTAL W WINDS 20 TO 30 KT OVR THE NRN WATERS SAT INTO SUN. MODELS ALSO IN GOOD AGREEMENT ON THE TIMING OF THE FOLLOWING COLD FRONT. THE GFS/GEM/ECMWF/UKMET ALL BRING THE FRONT TO NEAR THE OUTER PART OF CAPE FEAR TO HATTERAS CANYON ZONE BY 12Z SUN...THEN STALL S OF CAPE FEAR SUN NIGHT. MODELS ALSO FCST A BRIEF NE SURGE OF 25 KT S OF HATTERAS CANYON SUN...WHICH LOOKS GOOD. A LRG HIGH PRES PASS TO THE N.

FOR MON AND TUE...MODELS DISAGREE ON TIMING OF SFC LOW FCST TO MOVE NE THRU THE OHIO VALLEY MON THEN NEWRD TUE. THE UKMET/ECMWF TRACK THE LOW INTO SRN ONT AND QUE...THE UKMET HAS SLGTLY MORE SOUTHERN TRACK. THE GFS TAKES THE LOW ACROSS NEW ENGLAND...AS DOES THE GEM...BUT ABOUT 12 HRS FASTER. THE TRACK OF THE LOW ALSO AFFECTS THE SPEED OF THE PRECEEDING COLD FRONT. THE UKMET/ECMWF ALSO FCST MRGNL SW GALES AHD OF THE FRONT...SO WILL MAINTAIN SW GALES AHEAD OF THE FRONT...MAINLY OVR THE OUTER WATERS S OF 39N. SINCE THE GFS IS STILL AN OUTLIER AND THE ECMWF/UKMET IN FAIRLY GOOD AGREEMENT WITH GOOD CONSISTENCY...WILL USE A UKMET/ECMWF BLEND. MAY STAY WITH ALL ECMWF WHEN THE 00Z RUN IS AVBL.

.SEAS...THE MULTIGRID WAVEWATCH III INITIALIZED WELL THIS EVENING. WV GDNC LOOKS REASONABLE AND THIS MODEL WILL BE FOLLOWED...EXCEPT ON TUE WHEN THE ECMWF/UKMET WINDS WL BE USED...SO WL THE ECMWF WAM ON TUE.

.EXTRATROPICAL STORM SURGE GUIDANCE...

.WARNINGS...PRELIMINARY. ANY CHANGES WILL BE COORDINATED THROUGH AWIPS 12 PLANET CHAT OR BY TELEPHONE:

.NT1 NEW ENGLAND WATERS...
...NONE.

.NT2 MID ATLC WATERS...
.ANZ920...BALTIMORE CANYON TO THE GREAT SOUTH CHANNEL...
...GALE POSSIBLE TUE.
.ANZ905...THE GREAT SOUTH CHANNEL TO THE HAGUE LINE...
...GALE POSSIBLE TUE.
.ANZ910...EAST OF THE GREAT SOUTH CHANNEL AND SOUTH OF 39N...
...GALE POSSIBLE TUE INTO TUE NIGHT.
.ANZ925...OUTER WATERS FROM BALTIMORE CANYON TO HATTERAS CANYON...
...GALE POSSIBLE TUE.

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.FORECASTER PROSISE. OCEAN PREDICTION CENTER.

4 NAVTEX Forecast

FZNT26 KNHC 040259
OFFN05

NAVTEX MARINE FORECAST
NWS NATIONAL HURRICANE CENTER MIAMI FL
1059 PM EDT TUE APR 3 2012

...PLEASE REFER TO COASTAL WATERS FORECASTS (CWF) AVAILABLE THROUGH NOAA WEATHER RADIO AND OTHER MEANS FOR DETAILED COASTAL WATERS FORECASTS...

SAN JUAN CARIBBEAN WATERS

.SYNOPSIS...WEAK HIGH PRES BETWEEN THE BAHAMAS AND BERMUDA WILL SHIFT EASTWARD INTO CENTRAL ATLC THROUGH SAT WITH MODERATE TRADES ACROSS THE BASIN. FRONTAL TROUGH DRIFTING SLOWLY SE ACROSS NORTHERN PORTIONS OF THE TROPICAL N ATLC ALONG 21N/22N THIS AFTERNOON WILL DRIFT SE AND STALL OUT ACROSS N PORTIONS NEAR 20N THROUGH WED. SECONDARY COLD FRONT MOVING SE INTO N PORTIONS ON THU. NEW COLD FRONT TO MOVE SE INTO STRAITS OF FLORIDA AND NW CUBA SAT AND INTO NW CARIB EARLY SUN.

.OVERNIGHT...NE TO E WINDS 10 TO 15 KT. SEAS 2 TO 3 FT.
.WED...NE TO E WINDS 10 TO 15 KT. SEAS 2 TO 4 FT.
.WED NIGHT...NE TO E WINDS 10 TO 15 KT. SEAS 3 TO 5 FT.
.THU...E WINDS 10 TO 15 KT. SEAS 4 TO 6 FT.
.THU NIGHT...E WINDS 10 TO 15 KT. SEAS 4 TO 6 FT. SCATTERED SHOWERS.
.FRI...E WINDS 10 TO 15 KT. SEAS 4 TO 6 FT.
.FRI NIGHT…E TO SE WINDS 10 TO 15 KT. SEAS 4 TO 6 FT.
.SAT...E WINDS 10 TO 15 KT. SEAS 3 TO 5 FT.
.SAT NIGHT…E WINDS 10 TO 15 KT. SEAS 2 TO 4 FT.
.SUN...E WINDS 5 TO 10 KT. SEAS 2 TO 4 FT.
.SUN NIGHT…E WINDS 10 TO 15 KT. SEAS 3 TO 5 FT.

SAN JUAN ATLANTIC WATERS

.SYNOPSIS...A COLD FRONT EXTENDING FROM 23N65W TO 27N75W WILL MOVE S AND SETTLE NEAR 21N65W ACROSS THE SE BAHAMAS BY WED AND DISSIPATE. FRESH TO STRONG WINDS AND LARGE NW SWELL WILL AFFECT THE NE PORTION OF THE AREA THROUGH TONIGHT. WEAK HIGH PRES WILL BUILD IN BEHIND THE FRONT THROUGH WED. WINDS WILL INCREASE ACROSS THE N WATERS WED NIGHT SE OF NEXT COLD FRONT WHICH WILL REACH THE N BORDER OF AREA THU.

.OVERNIGHT...N TO NE WINDS 5 TO 10 KT. SEAS 2 TO 4 FT.
.WED...NE WINDS 10 TO 15 KT. SEAS 4 TO 6 FT. SCATTERED SHOWERS.
.WED NIGHT...NE TO E WINDS 10 TO 15 KT. SEAS 5 TO 7 FT...BUILDING TO 6 TO 9 FT AFTER MIDNIGHT. SCATTERED SHOWERS.
.THU...E WINDS 10 TO 15 KT. SEAS 7 TO 9 FT.
.THU NIGHT...E WINDS 10 TO 15 KT. SEAS 7 TO 9 FT.
.FRI...E TO SE WINDS 10 TO 15 KT. S EAS 6 TO 8 FT.
.FRI NIGHT…E WINDS 10 TO 15 KT. SEAS 5 TO 7 FT.
.SAT...E TO SE WINDS 10 TO 15 KT. SEAS 3 TO 5 FT.
.SAT NIGHT…E TO SE WINDS 10 TO 15 KT. SEAS 4 TO 6 FT.
.SUN...E TO SE WINDS 5 TO 10 KT. SEAS 2 TO 4 FT.
.SUN NIGHT…E WINDS 10 TO 15 KT. SEAS 3 TO 5 FT.

5 High Seas Forecasts

FZPN02 KWBC 291700
HSFEPI

HIGH SEAS FORECAST FOR METAREA XII
NWS OCEAN PREDICTION CENTER WASHINGTON DC
1745 UTC TUE JUL 29 2008

CCODE/1:31:12:01:00/AOW+POR/NWS/CCODE
SUPERSEDED BY NEXT ISSUANCE IN 6 HOURS

SEAS GIVEN AS SIGNIFICANT WAVE HEIGHT...WHICH IS THE AVERAGE HEIGHT OF THE HIGHEST 1/3 OF THE WAVES. INDIVIDUAL WAVES MAY BE MORE THAN TWICE THE SIGNIFICANT WAVE HEIGHT.

PAN PAN

PACIFIC N OF 30N AND S OF 67N E OF A LINE FROM BERING STRAIT TO 50N 160E

SYNOPSIS VALID 1200 UTC JUL 29.
24 HOUR FORECAST VALID 1200 UTC JUL 30.
48 HOUR FORECAST VALID 1200 UTC JUL 31.

.WARNINGS.
...HURRICANE FORCE WIND WARNING...
.LOW 57N147W 980 MB MOVING E 15 KT...WITH A FRONT FROM 59N146W TO 58N138W TO 49N130W TO 43N132W TO 40N134W. WITHIN 240 NM S AND SW QUADRANTS...WINDS 45 TO 65 KT. SEAS 18 TO 32 FT. ELSEWHERE WITHIN 480 NM W AND 900 NM S QUADRANTS...WINDS 30 TO 45 KT. SEAS 14 TO 26 FT. WITHIN 120 NM E OF FRONT BETWEEN 47N AND 55N...WINDS 35 TO 50 KT. SEAS 14 TO 23 FT. ELSEWHERE WITHIN 180 NM N AND E OF FRONT...WINDS 25 TO 40 KT. SEAS 10 TO 18 FT. ALSO N OF A LINE FROM 53N163W TO 39N140W TO 40N130W TO 47N124W...WINDS 20 TO 30 KT. SEAS 10 TO 18 FT.
.24 HOUR FORECAST LOW 58N138W 1000 MB. WITHIN 360 NM S QUADRANT...AND FROM 46N TO 52N BETWEEN 129W AND 137W...WINDS 25 TO 35 KT. SEAS 15 TO 28 FT. ELSEWHERE E OF A LINE FROM 57N147W TO 45N139W TO 43N125W...WINDS 20 TO 30 KT. SEAS 10 TO 18 FT.
.48 HOUR FORECAST LOW INLAND AND CONDITIONS DIMINISHED.

...STORM WARNING...
.LOW 43N177E 980 MB MOVING NE 30 KT. COLD FRONT EXTENDS FROM 46N176W TO 40N176W TO 31N172E. FROM 34N TO 39N BETWEEN 168E AND 180W...WINDS 35 TO 50 KT. SEAS 15 TO 28 FT. ELSWHERE FROM 32N TO 41N BETWEEN 163E AND W OF 177W...WINDS 25 TO 40 KT. SEAS 10 TO 18 FT. WITHIN 120 NM N QUADRANT...AND WITHIN 120 NM N OF A FRONT FROM 44N177E TO 46N176W...ALSO WITHIN 240 NM E OF COLD FRONT N OF 39N...WINDS 35 TO 50 KT.

SEAS 13 TO 22 FT. ELSEWHERE WITHIN 420 NM E OF FRONT AND WITHIN 420 NM E QUADRANT...ALSO WITHIN 240 NM N AND NW SEMICIRCLES...WINDS 25 TO 40 KT. SEAS 10 TO 18 FT.
.24 HOUR FORECAST LOW 51N167W 957 MB. FRONT EXTENDS FROM 52N170W TO 51N160W TO 48N155W TO 37N164W. FROM 42N TO 49N BETWEEN 160W AND 174E...WINDS 40 TO 60 KT. SEAS 18 TO 30 FT. ELSEWHERE WITHIN 600 NM SW AND 720 NM SE QUADRANTS W OF FRONT...WINDS 30 TO 45 KT. SEAS 14 TO 23 FT. WITHIN 180 NM N AND E OF FRONT N OF 41N...WINDS 40 TO 60 KT. SEAS 14 TO 25 FT. ELSEWHERE WITHIN 480 NM W AND N QUADRANTS...ALSO WITHIN 300 NM NE AND 480 NM E OF FRONT...WINDS 25 TO 40 KT. SEAS 10 TO 18 FT.
.48 HOUR FORECAST LOW 56N160W 962 MB. FROM 50N TO 55N BETWEEN 153W AND 170W...WINDS 40 TO 60 KT. SEAS 20 TO 35 FT. ELSEWHERE WITHIN 480 NM W...480 NM S AND 240 NM N QUADRANTS...ALSO N OF A LINE FROM 48N160W TO 39N138W TO 40N130W TO 44N127W...WINDS 30 TO 45 KT. SEAS 14 TO 23 FT.

...GALE WARNING...
.FROM 30N TO 37N BETWEEN 119W AND 125W...WINDS 25 TO 35 KT. SEAS 10 TO 18 FT.
.24 HOUR FORECAST FROM 30N TO 42N BETWEEN 120W AND 130W...WINDS 20 TO 30 KT. SEAS 9 TO 14 FT.
.48 HOUR FORECAST FROM 30N TO 38N BETWEEN 118W AND 125W...N TO NW WINDS 25 TO 35 KT. SEAS 10 TO 16 FT.
...GALE WARNING...
.LOW 59N179E 1002 MB MOVING NE 20 KT. FROM 53N TO 57N BETWEEN 171W AND 176W...WINDS 25 TO 35 KT. SEAS TO 12 FT.
.24 HOUR FORECAST LOW 63N172W 997 MB. N OF 60N E OF 170W...WINDS 20 TO 30 KT. SEAS TO 10 FT.
.48 HOUR FORECAST LOW MOVED OVER ICE WITH CONDITIONS DIMINISHED.
...GALE WARNING...
.24 HOUR FORECAST LOW 32N169E 1005 MB. S OF 34N W OF 173E...WINDS 25 TO 40 KT. SEAS 10 TO 16 FT.
.48 HOUR FORECAST LOW 42N168W 1001 MB. WITHIN 420 NM S AND SE QUADRANTS...WINDS 30 TO 45 KT. SEAS 12 TO 20 FT.
...GALE WARNING...
.24 HOUR FORECAST LOW 44N167E 1007 MB. FROM 38N TO 45N W OF 170E...WINDS 20 TO 30 KT. SEAS 8 TO 14 FT.
.48 HOUR FORECAST LOW 46N177E 997 MB. FROM 40N TO 46N BETWEEN 176E AND 174W...WINDS 25 TO 40 KT. SEAS 10 TO 17 FT. FROM 40N TO 48N W OF 173W...WINDS 20 TO 30 KT. SEAS 8 TO 13 FT.
...HEAVY FREEZING SPRAY WARNING...
.N OF 60N W OF ALASKA...AREA OF MODERATE TO HEAVY FREEZING SPRAY.
.24 HOUR FORECAST W AND NW OF A LINE FROM 55N177E TO 61N174W...AREA OF LIGHT TO MODERATE FREEZING SPRAY.
.48 HOUR FORECAST W AND NW OF A LINE FROM 51N166E TO 62N171W...AREA OF LIGHT TO MODERATE FREEZING SPRAY.
.SYNOPSIS AND FORECAST.

.HIGH 40N151W 1039 MB MOVING E 15 KT.
.24 HOUR FORECAST HIGH 38N139W 1039 MB.
.48 HOUR FORECAST HIGH 33N137W 1033 MB.

.FORECASTER SHAW. OCEAN PREDICTION CENTER.

HIGH SEAS FORECAST
NWS NATIONAL HURRICANE CENTER MIAMI FL
1030 UTC TUE APR 03 2012

SUPERSEDED BY NEXT ISSUANCE IN 6 HOURS

SEAS GIVEN AS SIGNIFICANT WAVE HEIGHT...WHICH IS THE AVERAGE HEIGHT OF THE HIGHEST 1/3 OF THE WAVES. INDIVIDUAL WAVES MAY BE MORE THAN TWICE THE SIGNIFICANT WAVE HEIGHT.
SECURITE

E PACIFIC FROM THE EQUATOR TO 30N E OF 140W.

SYNOPSIS VALID 0600 UTC TUE APR 03.
24 HOUR FORECAST VALID 0600 UTC WED APR 04.
48 HOUR FORECAST VALID 0600 UTC THU APR 05.

.WARNINGS.

.NONE.

.SYNOPSIS AND FORECAST.

.N OF 27N BETWEEN 120W AND 125W NW TO N WINDS 20 TO 25 KT. SEAS 12 TO 16 FT IN NW SWELL. ELSEWHERE WITHIN AREA BOUNDED BY 23N110W TO 18N105W TO 00N105W TO 00N125W TO 23N120W TO 23N110W WINDS LESS THAN 20 KT. SEAS 8 TO 12 FT IN NW SWELL EXCEPT 10 TO 15 FT N OF 20N BETWEEN 112W AND 123W.
.18 HOUR FORECAST COLD FRONT FROM 30N133W TO 29N140W. N OF FRONT NE WINDS 20 KT. SEAS TO 9 FT IN NW SWELL. ELSEWHERE IN AREA BOUNDED BY 23N110W TO 17N102W TO 04N102W TO 04N130W TO 23N130W TO 23N110W WINDS LESS THAN 20 KT. SEAS 8 TO 11 FT IN NW SWELL.
.24 HOUR FORECAST WEAKENING COLD FRONT FROM 30N126W TO 28N140W. N OF FRONT NE WINDS 20 KT. SEAS 8 TO 10 FT IN MIXED NE AND NW SWELL. FROM 14N TO 23N W OF 135W NE TO E WINDS 20 KT. SEAS 8 TO 10 FT IN NW SWELL. ELSEWHERE N OF 06N W OF LINE FROM 23N110W TO 16N102W TO 06N102W AND S OF 06N W OF 110W WINDS LESS THAN 20 KT. SEAS 8 TO 10 FT IN NW SWELL.
.48 HOUR FORECAST DISSIPATING COLD FRONT 30N114W TO 25N115W TO 22N122W. W OF LINE FROM 30N114W TO 17N140W NE TO E WINDS 20 KT EXCEPT N TO NW WINDS 20 TO 25 KT E OF 123W. SEAS 8 TO 12 FT IN NW SWELL.

ELSEWHERE W OF LINE FROM 23N110W TO 13N100W TO 00N100W WINDS LESS THAN 20 KT. SEAS TO 9 FT IN NW SWELL.

.GULF OF CALIFORNIA FROM 24N TO 29N NW TO N WINDS 20 KT. SEAS LESS THAN 8 FT.
.06 HOUR FORECAST WINDS LESS THAN 20 KT. SEAS LESS THAN 8 FT.

.REMAINDER OF AREA WINDS LESS THAN 20 KT. SEAS LESS THAN 8 FT.

CONVECTION VALID AT 0630 UTC TUE APR 03...
.SCATTERED MODERATE FROM 15N TO 18N BETWEEN 115W AND 120W.

.INTERTROPICAL CONVERGENCE ZONE/MONSOON TROUGH...
ITCZ AXIS EXTENDS FROM 08N112W TO 05N127W TO 05N140W. SCATTERED MODERATE WITHIN 90 NM N OF AXIS BETWEEN 114W AND 127W.

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.FORECASTER SCHAUER. NATIONAL HURRICANE CENTER.

NATIONAL WEATHER SERVICE HONOLULU HI
NORTH PACIFIC EQUATOR TO 30N BETWEEN 140W AND 160E

THIS SEGMENT OF THE HIGH SEAS FORECAST USES 1-MINUTE AVERAGE WINDS WHICH MAY BE HIGHER THAN 10-MINUTE AVERAGE WINDS.

SYNOPSIS VALID 1200 UTC JUL 29 2008.
24 HOUR FORECAST VALID 1200 UTC JUL 30 2008.
48 HOUR FORECAST VALID 1200 UTC JUL 31 2008.

.WARNINGS.

...GALE WARNING...
.FRONT EXTENDS FROM 30N169E TO 28N160E NEARLY STATIONARY. ISOLATED MODERATE TSTMS WITHIN 90 NM N OF TROUGH.
.24 HOUR FRONT EXTENDS FROM 30N164E TO 28N160E. SW WINDS 25 TO 35 KT OVER FORECAST WATERS WITHIN 300 NM SE OF FRONT.
.48 HOUR FORECAST FRONT EXTENDS FROM 30N173E TO 25N160E. NE WINDS 20 TO 30 KT OVER FORECAST WATERS NW OF FRONT.

.SYNOPSIS AND FORECAST.

.RIDGE THROUGH 30N170W TO 25N175E TO 26N161E MOVING SE SLOWLY.

.E WINDS 25 TO 30 KT IN AREA BOUNDED BY 28N140W TO 08N140W TO 08N170E TO 15N170E TO 18N170W TO 25N160W TO 28N140W.

.24 HOUR FORECAST E WINDS 25 TO 30 KT IN AREA FROM 10N TO 25N E OF 165W.
.48 HOUR FORECAST E WINDS 25 TO 30 KT IN AREA FROM 10N TO 25N E OF 170W.

.SEAS 12 TO 14 FT OVER WATERS N OF 08N E OF 165E. SEAS 9 TO 12 FT ELSEWHERE OVER WATERS N OF 05N.
.24 HOUR FORECAST SEAS 12 TO 15 FT OVER WATERS N OF 08N E OF 165W. SEAS 12 TO 14 FT IN AREA N OF 28N W OF 177E. SEAS 9 TO 12 FT ELSEWHERE OVER WATERS N OF 04N.
.48 HOUR FORECAST SEAS 12 TO 15 FT OVER WATERS FROM 10N TO 28N E OF 170W. SEAS 12 TO 14 FT IN AREA N OF 26N W OF 168E. SEAS 9 TO 12 FT ELSEWHERE OVER WATERS N OF 04N.
.WINDS 20 KT OR LESS AND SEAS 9 FT OR LESS OVER REMAINDER OF FORECAST AREA.

.ITCZ THROUGH 08N140W TO 07N160W TO 06N180W TO 05N170E. ISOLATED MODERATE TSTMS WITHIN 90 NM OF ITCZ.

.HONOLULU HI.

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FZPN40 KWBC 291645
HSFNP

HIGH SEAS FORECAST
NATIONAL WEATHER SERVICE HONOLULU HI
1700 UTC TUE JUL 29 2008

SUPERSEDED BY NEXT ISSUANCE IN 6 HOURS

SEAS GIVEN AS SIGNIFICANT WAVE HEIGHT...WHICH IS THE AVERAGE HEIGHT OF THE HIGHEST 1/3 OF THE WAVES. INDIVIDUAL WAVES MAY BE MORE THAN TWICE THE SIGNIFICANT WAVE HEIGHT.

THIS HIGH SEAS FORECAST USES 1-MINUTE AVERAGE WINDS WHICH MAY BE HIGHER THAN 10-MINUTE AVERAGE WINDS.

SECURITE

NORTH PACIFIC EQUATOR TO 30N BETWEEN 140W AND 160E

SYNOPSIS VALID 1200 UTC JUL 29 2008.
24 HOUR FORECAST VALID 1200 UTC JUL 30 2008.
48 HOUR FORECAST VALID 1200 UTC JUL 31 2008.

.WARNINGS.

...GALE WARNING...
.FRONT EXTENDS FROM 30N169E TO 28N160E NEARLY STATIONARY. ISOLATED MODERATE TSTMS WITHIN 90 NM N OF FRONT.
.24 HOUR FRONT EXTENDS FROM 30N164E TO 28N160E. SW WINDS 25 TO 35 KT OVER FORECAST WATERS WITHIN 300 NM SE OF FRONT.
.48 HOUR FORECAST FRONT EXTENDS FROM 30N173E TO 25N160E. NE WINDS 20 TO 30 KT OVER FORECAST WATERS NW OF FRONT.

.SYNOPSIS AND FORECAST.

.RIDGE THROUGH 30N170W TO 25N175E TO 26N161E MOVING SE SLOWLY.

.E WINDS 25 TO 30 KT IN AREA BOUNDED BY 28N140W TO 08N140W TO 08N170E TO 15N170E TO 18N170W TO 25N160W TO 28N140W.
.24 HOUR FORECAST E WINDS 25 TO 30 KT IN AREA FROM 10N TO 25N E OF 165W.
.48 HOUR FORECAST E WINDS 25 TO 30 KT IN AREA FROM 10N TO 25N E OF 170W.

.SEAS 12 TO 14 FT OVER WATERS N OF 08N E OF 165E. SEAS 9 TO 12 FT ELSEWHERE OVER WATERS N OF 05N.
.24 HOUR FORECAST SEAS 12 TO 15 FT OVER WATERS N OF 08N E OF 165W. SEAS 12 TO 14 FT IN AREA N OF 28N W OF 177E. SEAS 9 TO 12 FT ELSEWHERE OVER WATERS N OF 04N.
.48 HOUR FORECAST SEAS 12 TO 15 FT OVER WATERS FROM 10N TO 28N E OF 170W. SEAS 12 TO 14 FT IN AREA N OF 26N W OF 168E. SEAS 9 TO 12 FT ELSEWHERE OVER WATERS N OF 04N.
.WINDS 20 KT OR LESS AND SEAS 9 FT OR LESS OVER REMAINDER OF FORECAST AREA.

.ITCZ THROUGH 08N140W TO 07N160W TO 06N180W TO 05N170E. ISOLATED MODERATE TSTMS WITHIN 90 NM OF ITCZ.

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.HONOLULU HI.